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Variety Guide

2023

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MEET YOUR SEEDS TECHNICAL EXPERTS

Ben Urquhart
Hybrid Barley Technical Expert

Rob Jackson
Malting Barley Technical Expert

Matthew Bull
Wheat Technical Expert & Seeds Technical Lead

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ASK US A QUESTION OR GIVE US FEEDBACK, 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:

? product.technical_enquiries@syngenta.com

VISIT US AT EVENTS THIS YEAR

MORE DETAILS ON OUR EVENTS WILL BE AVAILABLE SOON.

1. Cereals Event
2. Arable Scotland
3. Syngenta Rougham Innovation Centre
4. Syngenta Banbury Innovation Centre
5. Syngenta Newark Innovation Centre
6. St Boswells Open Day
7. Balgonie Open Day
8. Kilham Innovation Centre
9. Syngenta Stafford Ryegrass Site
10. Syngenta & Robin Appel Malting Barley Site
11. Wynnstay Arable Event

VISIT WWW.SYNGENTA.CO.UK

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GROWING FOR END MARKETS

SPRING BARLEY

WHY CHOOSE SPRING BARLEY?

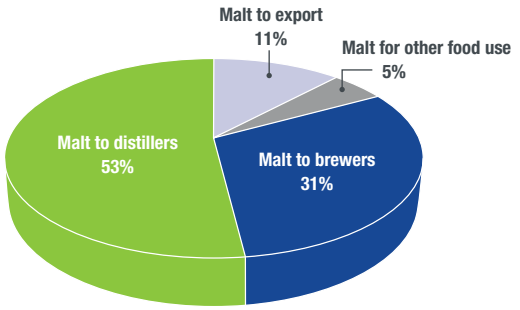
Spring barley is the second largest arable crop in the UK.

The majority of spring barley grown in the UK goes into the malting chain. After coming through some of the uncertainty around Covid and malt usage we can look forward to a good year in terms of spring barley demand. This strong demand means that malting premiums are again looking favourable for harvest 2023, ensuring a positive position for spring barley growers planning ahead.

One of the key things when looking at varieties is consistency and the ability to meet specifications. We have had several very different, and in some ways difficult years for spring barley growers. Recent weather patterns have brought challenges not just for winter drilled crops, but for spring drilled crops as well. It is also clear that some spring barley varieties are more resilient and consistent under changing conditions. Your location within the UK will be a big driver for your variety and market choice – with some growers having the choice of which market to grow for. Malt distilling is the largest market for spring barley – and used to be focused in the North, but now we see significant volumes being grown and used in England too, alongside the traditional brewing and export volumes. Spring barley crops may not yield as high as winter crops, but for many growers, spring barley can be the most profitable crop on farm. Syngenta have been breeding barley varieties for 40 years and can offer expert advice to help you get the best from your crop.

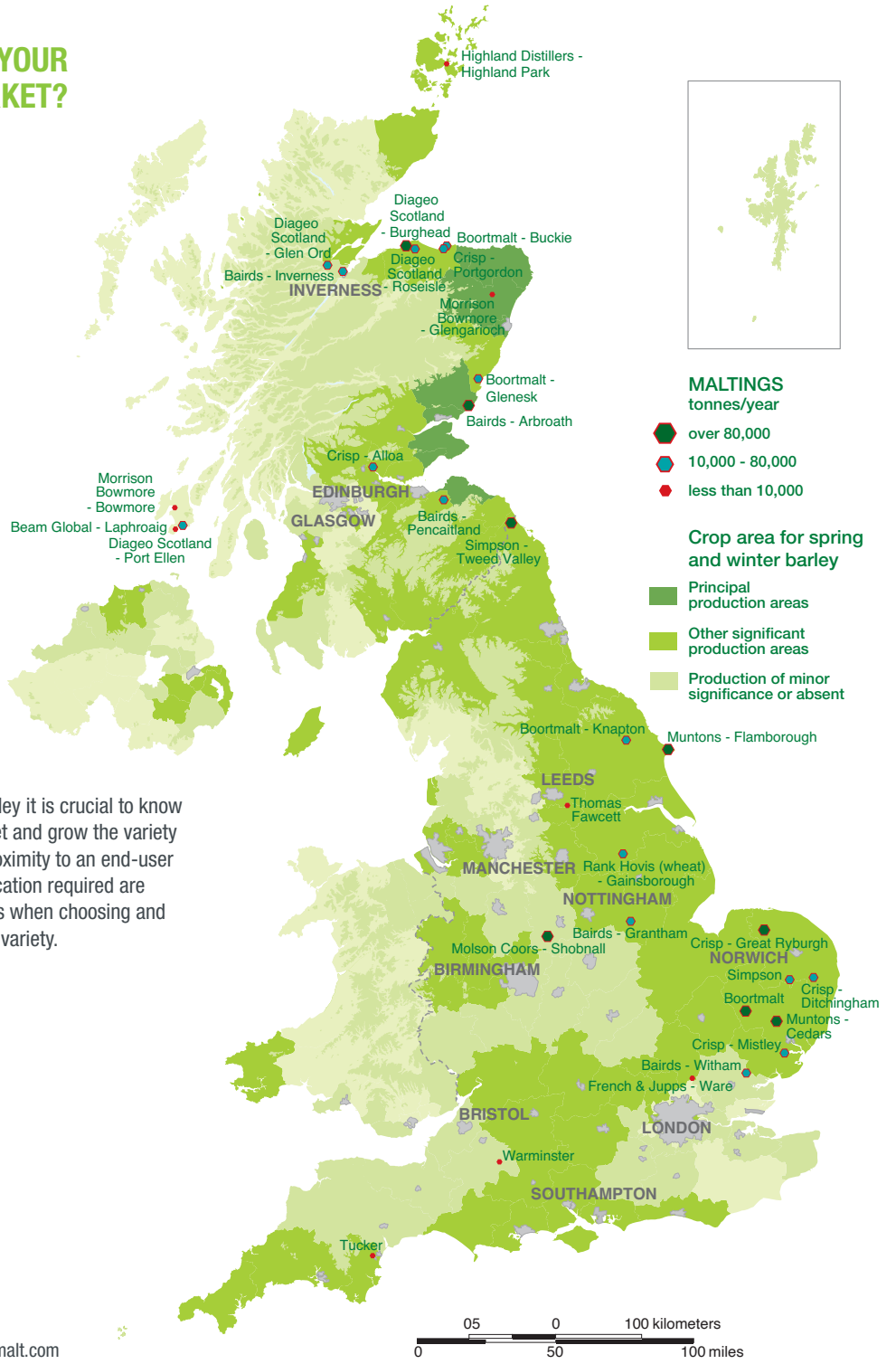
Choosing a dual purpose variety (one that is approved for both brewing and malt distilling) gives growers choice on which market to grow for, and may open up more marketing opportunities.

The use of malt produced in 2021:



Source: www.ukmalt.com

WHAT IS YOUR END MARKET?



With spring barley it is crucial to know your end market and grow the variety accordingly. Proximity to an end-user and the specification required are both key factors when choosing and managing your variety.

Source: www.ukmalt.com

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GROWING FOR END MARKETS

WHAT IS YOUR END MARKET?

With spring barley it is critical to know your end market and grow the variety accordingly. The table below highlights the key considerations for each end market.

	BREWING USE	MALT DISTILLING	GRAIN DISTILLING	FEED
What's it for?				
How big is this market?	382,500 ha	235,500 ha	10,000 ha	120,000 ha
Main geographic region	UK (mainly England)	Scotland, Northern England and East Anglia	Scotland and some areas of England (check locally)	West and North of UK
What do end markets need?	1.6-1.75% N (up to 1.8% 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)	Over 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 with Full Market Approval	LAUREATE	LAUREATE	FAIRING	WAGGON SCHOLAR SY SPLENDOR

AN OVERVIEW OF OUR SPRING BARLEY VARIETIES

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.

Fairing Spring barley

FULL MBC Approval for grain distilling, with contracts available in this market. Very early ripening and excellent *Rhynchosporium* resistance makes **FAIRING** ideal for the Scottish grain distilling markets.

SY Splendor Spring barley

Consistently yielding across the whole of the UK, **SY SPLENDOR** is a feed variety with high yields, stiff straw and excellent specific weight.

Propino Spring barley

Tried and trusted spring barley. **PROPINO** no longer has MBC Approval, but remains a variety that has popularity on farm, and may be accepted for brewing by individual maltsters (check with maltsters before growing).

Scholar Spring barley

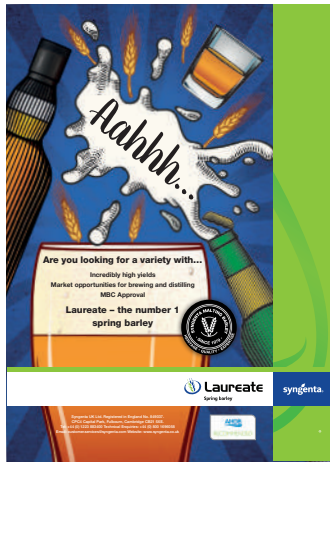
A spring feed barley with consistent yield performance, stiff straw and very high specific weight, **SCHOLAR** is a very good option for the feed market.

Waggon Spring barley

A popular spring feed barley variety in Scotland, due to its excellent straw strength, straw yield and very early maturity. **WAGGON** remains a firm favourite.

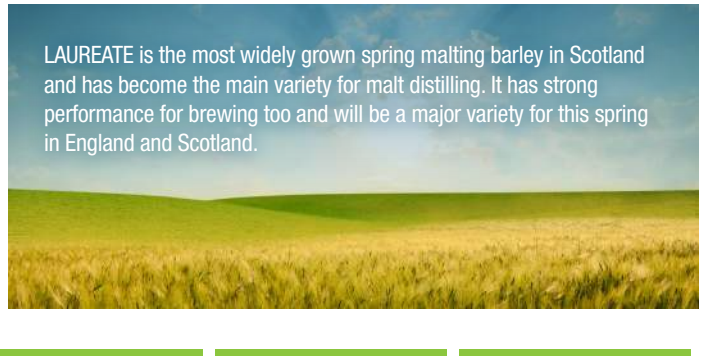
GROWING FOR END MARKETS

Laureate
Spring barley



VARIETY DESCRIPTION

LAUREATE is a non-GN variety with Full MBC Approval for brewing and malt distilling. It is high yielding with an excellent disease and agronomic profile.



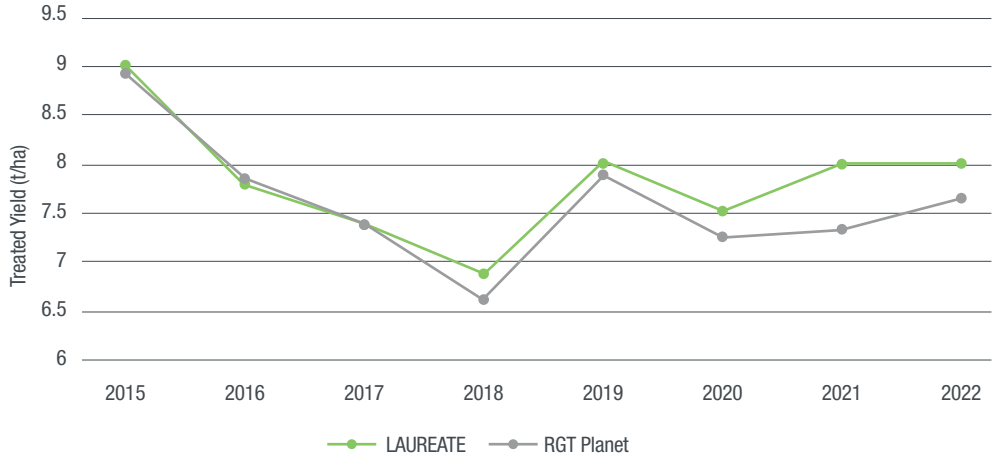
	LAUREATE	RGT PLANET	LG DIABLO
MALTING BARLEY APPROVAL	Full for Brewing Full for Malt Distilling	Full for Brewing	Full for Brewing Full for Malt Distilling
% TREATED CONTROLS	102.8	98.4	101.4
SPECIFIC WEIGHT (kg/hl)	67.2	68.8	67.8
RESISTANCE TO LODGING (NO PGR)	6	7	7
RIPENING	+1	0	+2
BROWN RUST	5	5	5
RHYNCHOSPORIUM	7	6	6

Source: AHDB Recommended List 2023

One reason for the growing popularity of LAUREATE is its consistency both on farm and through the maltings.

Since joining the AHDB Recommended List in 2016, LAUREATE has continued to yield competitively, while some of its main rivals of a similar age have started to decline and now yield below LAUREATE in Official Trials.

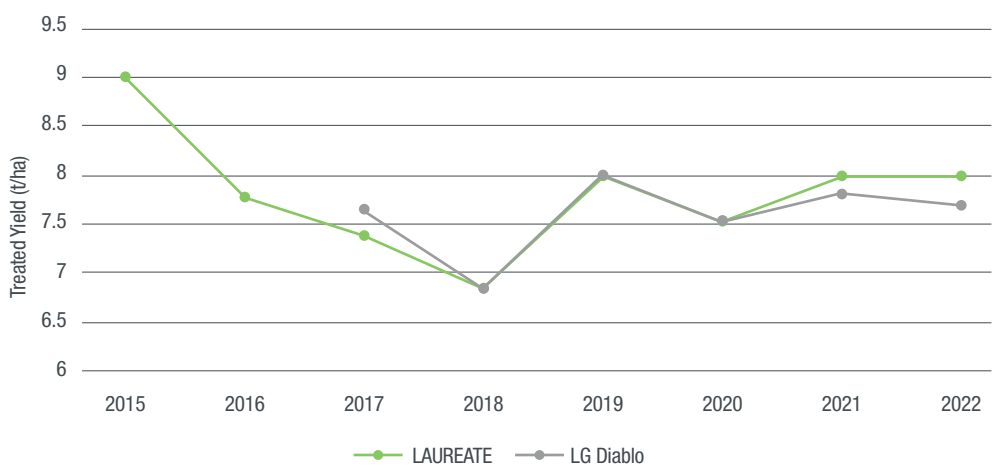
LAUREATE SHOWS SIGNIFICANTLY BETTER CONSISTENCY THAN RGT PLANET OVER THE PAST 8 YEARS



Source: AHDB Harvest results 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022

LAUREATE has a strong consistent yield each year, so it still competes favourably with newer varieties in both brewing and malt distilling sectors.

LAUREATE ALSO SHOWS FAVOURABLE YIELDS IN THE DISTILLING SECTOR AND IN THE NEW RL SHOWS HIGHER PERFORMANCE WHEN COMPARED TO LG DIABLO



Source: AHDB Harvest results 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022

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GROWING FOR END MARKETS

LAUREATE REMAINS A FAVOURITE FOR BOTH END MARKETS

- Strong support from end-users with multiple contracts available for both brewing and malt distilling.
- Many maltsters will only take an MBC Approved variety. Check with your local contracts to see which variety they require for the coming growing season.
- Later applications of nitrogen will increase the final % N within the grain.
- Higher yielding varieties have a natural dilution effect, so high yields will decrease % grain N.

LAUREATE can be grown for both brewing and malt distilling, but these two markets require a different % grain N in order to make either beer or whisky. It is important to know which market your grain is going to, so you can tailor your nitrogen inputs and achieve the right specification for the market you are growing for.

INCREASE

DID YOU KNOW?

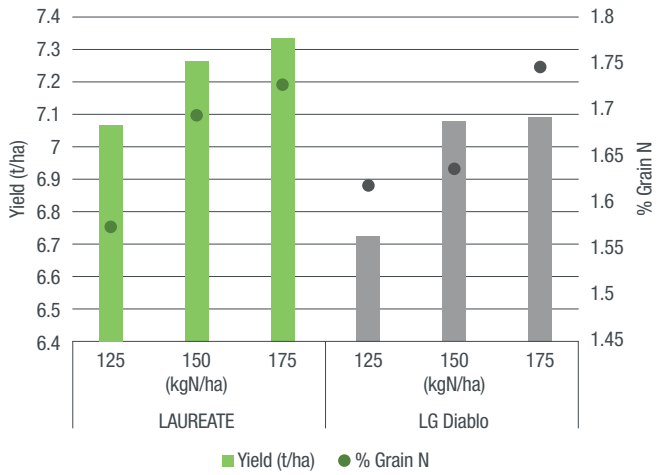
Syngenta have been carrying out nitrogen rate trials for over 5 years on LAUREATE.

Results have shown a consistent pattern despite very different seasons.

- Increasing total nitrogen applied increases yield, but it levels off with high rates
- High total rate of nitrogen applied has the biggest impact on % grain N

LAUREATE FOR BREWING

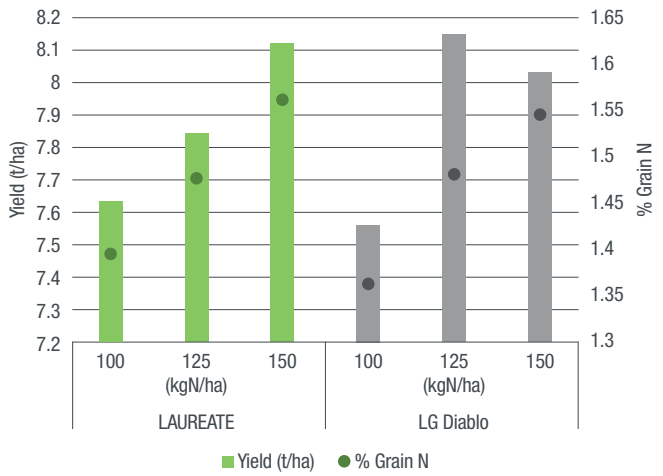
- Aim for a % grain N of 1.6-1.75%
- 2 splits of nitrogen will help achieve higher % N



Source: Syngenta N trials England 2019-21 mean
(9 trials for yield, 7 trials for % Grain N)

LAUREATE FOR MALT DISTILLING

- Aim for a grain N of below 1.65%
- 100% application of nitrogen in the seedbed will help keep the grain N lower



Source: Syngenta N trials Scotland 2019-21 mean (8 trials)

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GROWING FOR END MARKETS

Fairing
Spring barley

VARIETY DESCRIPTION

FAIRING is the only spring malting barley with Full MBC Approval for grain distilling. Unlike other varieties FAIRING was specifically bred for the grain distilling market and contracts are available in both Scotland and some areas of England this year.

KEY FACTS

- Earliest maturing variety on the AHDB Recommended List
- The highest resistance rating to *Rhynchosporium* available
- Delivers very high nitrogen
- Fantastic grain quality with high specific weight and low screenings

	FAIRING
MALTING BARLEY APPROVAL	Full for Grain Distilling
% TREATED CONTROLS	92.9
SPECIFIC WEIGHT (kg/hl)	68.9
RESISTANCE TO LODGING (NO PGR)	8
RIPENING	-2
MILDEW	8
RHYNCHOSPORIUM	8

Source: AHDB Recommended List 2023

END MARKETS

FAIRING is not as high yielding as LAUREATE but grows especially well in Scotland and areas of England where grain distilling contracts are available. It delivers very high nitrogen which helps it to meet the grain distilling contract specifications (typically above 1.85% N). It also has a very high specific weight. FAIRING has contracts available for harvest 2023, check locally.

EARLY
variety to mature

DID YOU KNOW?

FAIRING has been the earliest maturing variety on the RL ever since it was Recommended. This early maturity is key in areas of Scotland to enable timely harvest before wet weather prevents combining and starts to impact quality.

VARIETY MATURITY RATINGS

	2016	2017	2018	2019	2020	2021	2022	2023
DIVINER								1
FLORENCE								0
HURLER								1
KWS CURTIS								1
SUN KING								1
SY SIGNET								1
SY TENNYSON								1
CB SCORE							1	1
JENSEN							1	
MALVERN							1	1
SPINNER							1	
CADIZ						1	1	0
SKYWAY						1	0	1
FAIRWAY					-1	0	-1	
FIREFOXX					0	1	0	0
ICONIC					0	0		
PROSPECT					0	1	1	1
SY SPLENDOR					1	2	1	
SY TUNGSTEN					1	1	1	
COSMOPOLITAN				1	0	1		
LG DIABLO			1	2	1	2	2	2
RGT ASTEROID			1	1	1			
CHANSON		-1	-1	0				
CONCERTO	0	0	0	0	0			
FAIRING	-2	-2	-2	-1	-2	-1	-2	-2
HACKER	-1	-1	-1	0				
KWS IRINA	-1	-1	0	0				
KWS SASSY	0	0	0	1	0	1	1	1
LAUREATE	0	0	1	1	1	1	1	1
OLYMPUS	0	0	1	1				
OVATION	0	0	0	1				
PROPINO	-1	-1	-1	0	-1	0		
RGT PLANET	-1	-1	0	0	0	0	0	0
SCHOLAR	0	0	1	1				
SIENNA	0	0	1	1	1	1		
WAGGON	-2							

Source: AHDB Recommended Lists 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023

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FEED SPRING BARLEY

Approximately 20% of the spring barley market is for pure feed, and it remains a popular choice for growers that have livestock to feed, where grain and straw remain equally important.

KEY VARIETY ATTRIBUTES FOR FEED BARLEY:

- Consistent yield
- Grain quality and starch content
- High tillering and good straw yield for bedding
- Grass weed suppression characteristics

Syngenta have 4 varieties which fit into the feed category, each with different characteristics to suit different situations.

SY Splendor
Spring barley

Now a FEED variety, SY SPLENDOR was originally bred as a malting barley, it brings consistently high yields across all regions, and excellent specific weight.

Scholar
Spring barley

SCHOLAR has made a name for itself as being known for exceptional grain quality and very stiff straw, popular in Scotland.

Waggon
Spring barley

With fantastic tillering ability and very high straw yields, plus very early ripening, WAGGON is a firm feed favourite in Scotland.

Propino
Spring barley

Once the biggest malting barley in England, PROPINO is still performing on many farms for feed, due to its big, bold grain.

KEY STATS FOR SYNGENTA FEED SPRING BARLEYS:

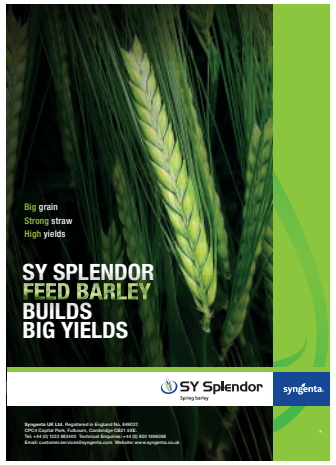
	SY SPLENDOR	SCHOLAR	WAGGON	PROPINO
YIELD	102	103	99	95
REGIONAL SUITABILITY	UK	North	UK but popular in Scotland	UK, but popular in East and West England
SPECIFIC WEIGHT (kg/hl)	68.1	69.0	67.4	68.1
RESISTANCE TO LODGING	7	7	7	7
RESISTANCE TO BRACKLING	9	9	8	8
MILDEW	9	[9]	[9]	6
BROWN RUST	3	5	5	5
RHYNCHOSPORIUM	[4]	5	3	5
RIPENING	+1	+1	-2	0
LATEST AHDB RL DATA	2022	2019	2016	2021

SPRING BARLEY: ANOTHER TOOL FOR GRASS WEED SUPPRESSION

Spring cropping is an excellent option in the rotation for suppressing grass weeds, it allows more time for new flushes of weeds to grow and be removed before the crop is planted.

Barley is more competitive than wheat against grass weeds due to its very high tillering capacity, which helps to smother unwanted weeds and block out sunlight to the bottom of the canopy. This also has the benefit of reducing seed return for following crops.

Increased seed rates can be used in some situations to increase this smothering effect.



SY SPLENDOR HAS A FANTASTIC COMBINATION OF AGRONOMIC FEATURES, WHICH ARE INVALUABLE IN A GRASS WEED SITUATION

- Rapid growth habit, ensuring quick establishment before grass weeds begin to compete
- High specific weight protects grain quality from nutrient competition with weeds
- Stiff straw, with high lodging and brackling ratings, give it extra strength to withstand a high weed density

HOW TO GET THE MOST FROM YOUR SPRING BARLEY

Syngenta have been conducting cultivation trials for the last 2 years looking at how our varieties perform in different cultivation systems.

These are examples of the systems we have trialled varieties in:

- Plough based system (2021 only)
- Deep (15-20 cm) non-inversion
- Shallow (5 cm) non-inversion (2022 only)
- No till

The trials were all carried out in Cambridgeshire on clay loam, using a bespoke trials drill designed to bridge the gap between small plot trials and farm equipment.

Each year the weather has played a big part in the results, with moisture availability and retention at drilling being key factors for establishing a good spring barley crop and building yield and quality. Sufficient tilth also had an impact on establishment. Where seed coverage was sub-optimal, we found plant counts were lower and impacted on final yield.

These two factors of seed to soil contact and soil moisture retention are essential in establishing a successful spring barley crop, regardless of cultivation choice.

An example of this is how yield was impacted in the last two seasons by both these factors:

2021

In 2021 a disc drill was used to establish plots across the three cultivation methods. It was difficult to achieve good slot closure in the no till situation, and therefore seed coverage was insufficient. Establishment was compromised and ultimately it had a negative impact on yield.

The plough-based system created the best seedbed at drilling which led to the higher plant establishment and overall better yield.

2022

In 2022 there was very little soil moisture at drilling, the no till plots had highest plant counts, because there was low soil disturbance and therefore moisture was retained.

Deep non-inversion was the most intensive cultivation, moving the most amount of soil and therefore had the highest moisture loss. This resulted in the lowest establishment which followed through to a lower yield.

Creating a seedbed with adequate moisture and seed to soil contact is key whichever method of cultivations used.

HOW TO GET THE MOST FROM YOUR SPRING BARLEY

ESTABLISHMENT

Selecting the correct seed rate for your chosen variety is key to optimal establishment. Syngenta recommend the following seed rates depending on variety and drilling date.

Spring Barley Variety Seed Rates (Seeds/m²)

	Before Jan	Jan - Feb	March	April
Laureate Spring barley	England 325	England 350	England 350-375 Scotland 350-400	England 375-400 Scotland 400-425
Fairing Spring barley	England 325	England 350	England 350-400 Scotland 350-400	England 400-425 Scotland 400-450
SY Splendor Spring barley	England 325	England 350	England 350-375 Scotland 350-400	England 375-400 Scotland 400-450
Scholar Spring barley	England 325	England 350	England 350-375 Scotland 350-400	England 375-400 Scotland 400-425
Waggon Spring barley	England 325	England 350	England 350-375 Scotland 350-400	England 375-400 Scotland 400-450

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HOW TO GET THE MOST FROM YOUR SPRING BARLEY

CANOPY MANAGEMENT

In order to maximise the potential of your spring barley it is important to keep green leaf area for as long as possible to maximise photosynthesis and build yield.

ELATUS® Era is approved for use on malting barley and is exceptional at controlling brown rust, the most prevalent barley disease of recent years.

Ramularia is becoming increasingly important as resistance to fungicides is increasing. Multi-site fungicides such as folpet will bring a level of control against *Ramularia*.

Some of the new high yielding spring barley varieties are more susceptible to lodging. Syngenta trials have found that height reduction is the key to keeping the crop standing. In high risk situations the use of a PGR is recommended to secure grain quality.

GROWING FOR END MARKETS

WINTER MALTING BARLEY

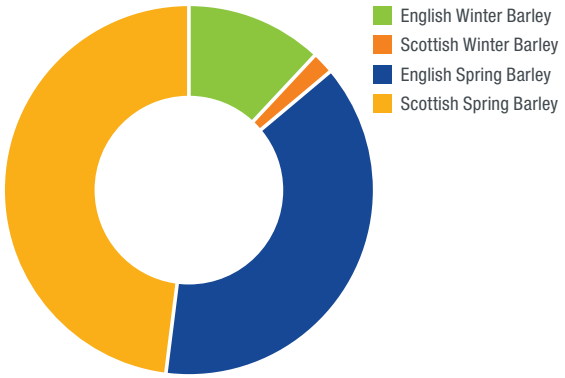
WHY CHOOSE WINTER MALTING BARLEY?

Winter malting barley accounted for approximately 14% of the barley purchased by maltsters from harvest 2021.

Although spring barley makes up a larger proportion of the barley grown for malting, winter malting barley is still highly valued by the industry for its high yield potential, early harvest and use in different markets.

Due to the demand from end markets, and premiums for the right specifications, winter malting barley is still an attractive proposition for harvest 2023.

MALTSTER PURCHASES H2021



Source: MAGB Final purchases report 2021

As with most quality crops, proximity to end users often dictates which varieties to grow and how to treat them. Page 4 shows the maltings map of the UK where you will find the location of maltsters closest to you.

Winter malting barley varieties will differ depending on location, so it is worth checking locally which varieties are preferred or if any contracts are available.

AN OVERVIEW OF OUR WINTER MALTING BARLEYS

Craft Winter barley

High yield, fantastic agronomics and a favourite with end users, CRAFT is the leading winter malting barley in the UK.

Electrum Winter barley

Winter malting variety bringing high yields, good quality and very early maturity to the UK.

Flagon Winter barley

Although no longer on the AHDB Recommended List, FLAGON remains a popular variety for East Anglia and is still a highly purchased variety.

SY Vessel Winter barley

The new non-GN winter malt that is currently under evaluation for the distilling market and offers a new option for the winter malt market.

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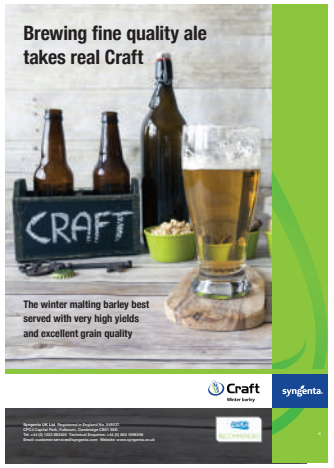
GROWING FOR END MARKETS

Craft
Winter barley



VARIETY DESCRIPTION

CRAFT has Full MBC Approval for Brewing with multiple contracts and strong demand from maltsters. It has secured itself as the number one winter malting barley in the UK and accounted for 45% of the winter barley purchased in England by maltsters from harvest 2021.

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!

DID YOU KNOW?

CRAFT has red pigmentation, and the awns and grain will appear red at and after flowering.

CRAFT KEY STATISTICS

LODGING (+ PGR)	8
SPECIFIC WEIGHT (kg/hl)	70.7
SCREENINGS	2.25 mm = 2.2% 2.5 mm = 6.7%

Source: AHDB Recommended List 2023/24.

BREEDING INSIGHTS

CRAFT has rapidly become the leading winter malting barley in the UK. It brings high yield, big bold grain and processing attributes that maltsters desire. CRAFT has Full MBC Approval for Brewing and has strong support from end users. Contracts are widely available.

KATHRYN HAMLEN, Syngenta

Electrum
Winter barley

VARIETY DESCRIPTION

ELECTRUM is the newest of the AHDB Recommended winter malt varieties with Full MBC Approval for Brewing. It is growing in popularity on farm with its very early maturity and good disease profile. Contracts are available for ELECTRUM for harvest 2023.

ELECTRUM is the highest yielding winter malting variety with Full MBC Approval for Brewing.

Strong disease profile with good untreated yields.

Very good grain quality and specific weight (70.5 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

ELECTRUM has slightly weaker straw and will benefit from a PGR programme, care should be taken in high lodging risk situations.

DID YOU KNOW?

ELECTRUM is one of the earliest winter barleys to ripen, but it will also be one of the first to reach all major spray application growth stages.

ELECTRUM KEY STATISTICS

TREATED YIELD	95.9%
SPECIFIC WEIGHT (kg/hl)	70.5
RIPENING (+/- KWS Orwell)	-1

Source: AHDB Recommended List 2023/24.

BREEDING INSIGHTS

ELECTRUM is the highest yielding winter malt with Full MBC Approval for brewing. It has 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 HAMLEN, Syngenta

Flagon

Winter barley

VARIETY DESCRIPTION

FLAGON remains popular with maltsters and was in the top 3 purchased varieties by maltsters across the UK in 2021. Popular in East Anglia, check locally for contracts.

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.

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.

KATHRYN HAMLEN, Syngenta

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.

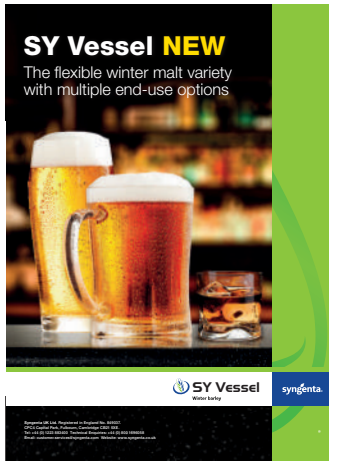
FLAGON KEY STATISTICS

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

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

SY Vessel

Winter barley



VARIETY DESCRIPTION

SY VESSEL is a non-GN winter malting barley variety that is under test for both brewing and distilling. It is the newest of our winter malting barley varieties and although not on the AHDB Recommended List, SY VESSEL is National Listed and contracts are available for harvest 2023, mainly for malt distilling.

Good treated yields with high specific weight.

Moderate disease resistance and moderate maturity.

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

BREEDING INSIGHTS

SY VESSEL is a special quality winter malting barley that is under evaluation for malt distilling. SY VESSEL can easily achieve malt specifications for both the brewing and distilling markets and as such offers flexibility to both growers and maltsters.

ROB JACKSON, Syngenta

WHERE TO GROW SY VESSEL

Contracts are available in East Angia and in Yorkshire.

WHERE NOT TO GROW SY VESSEL

Only grow if you have a contract for this variety.

SY VESSEL DISEASE PROFILE

MILDEW	MODERATELY RESISTANT
BROWN RUST	MODERATELY RESISTANT
RHYNCHOSPORIUM	MODERATELY SUSCEPTIBLE
NET BLOTCH	MODERATELY SUSCEPTIBLE

Source: NL1 and NL2 harvest results 2018/19.

HOW TO GET THE MOST FROM YOUR WINTER MALTING BARLEY

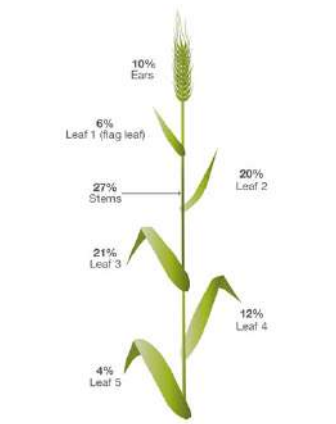
Varieties such as ELECTRUM, FLAGON and SY VESSEL will benefit from a full PGR programme particularly on high potential sites. Keeping the crop standing throughout the season will maintain yield, protect grain quality and aid ease of harvest.

ELATUS Era is a leading fungicide giving excellent control of brown rust and *Rhynchosporium,* helping each crop retain green leaf area for longer and build yield.

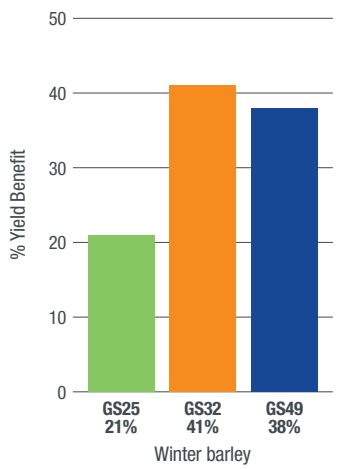
All varieties will have differences in disease and lodging. Fungicide and PGR programmes should be adapted to suit the variety, region and weather in the season.

WINTER BARLEY DISEASE CONTROL RECOMMENDATION

Adapt fungicide programmes to local situation and weather



T1 – GS31-32 IS THE KEY TIMING FOR BARLEY DISEASE CONTROL



ELATUS Era
0.5-0.6 l/ha +/-

folpet
1.0 l/ha
(*high *Ramularia* risk)

+ KAYAK®	+ AMISTAR®
• Net blotch control • Eyespot and mildew activity	• Rust protection • Take-all activity • Boost crop health

HOW TO GET THE MOST FROM YOUR WINTER MALTING BARLEY

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**

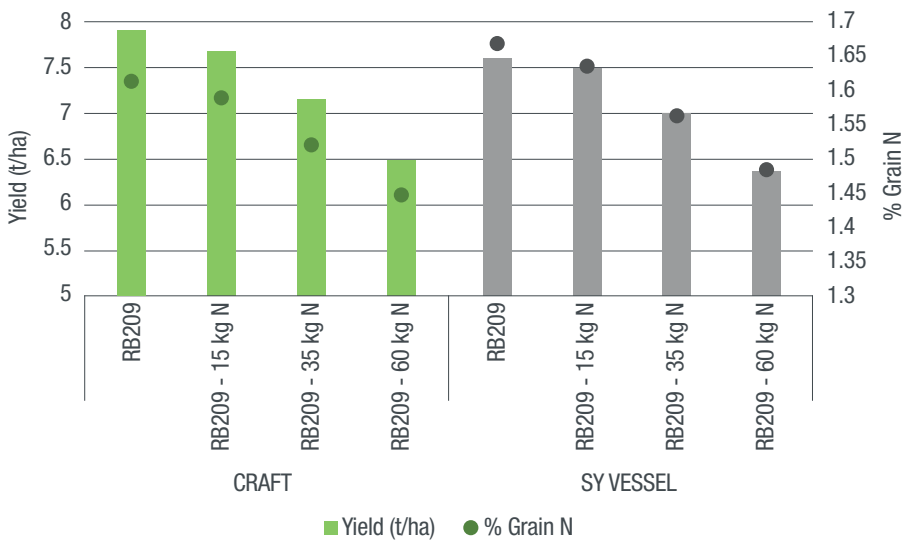
In order to achieve this, all our varieties require nitrogen applied in 2 splits, by the end of March.

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

A limited area of winter malting barley will be aimed at the malt distilling market in 2023. This will mainly be driven by the uptake of SY VESSEL. Like spring barley, the target % grain N for malt distilling will be below 1.65%.

Syngenta trials have shown that a reduction of between 15 and 35 kg total nitrogen applied will help to achieve a % grain N of below 1.65%, whilst still achieving optimum yields.

SY VESSEL IS ABLE TO PRODUCE A RANGE OF GRAIN NITROGENS THAT FIT BOTH THE MALT DISTILLING AND BREWING MARKETS



Source: Syngenta nitrogen trials (2 year mean 10 trials)

GROWING FOR END MARKETS

WINTER WHEAT

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.

SY Insitor Winter wheat

14 September — SAFE SOWING DATES — 31 January

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

Gleam Winter wheat

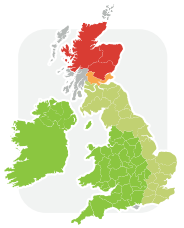
01 September — SAFE SOWING DATES — 14 February

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

Graham Winter wheat

01 September — SAFE SOWING DATES — 31 January

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



SYNGENTA WINTER WHEAT VARIETIES

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

SY Insitor Winter wheat
Very high yielding hard group 4 feed wheat with outstanding performance on light land and excellent grain quality.

Gleam Winter wheat
High yielding, adaptable and flexible variety with a very wide drilling window.

Graham Winter wheat
Secure, consistent feed wheat, with resilient *Septoria tritici* resistance. GRAHAM continues to deliver exceptional performance on farm.

Shabras Winter wheat
High yielding variety that performs particularly well on light land and in second wheat situations and has the ideal growth habit for suppressing grass weeds.

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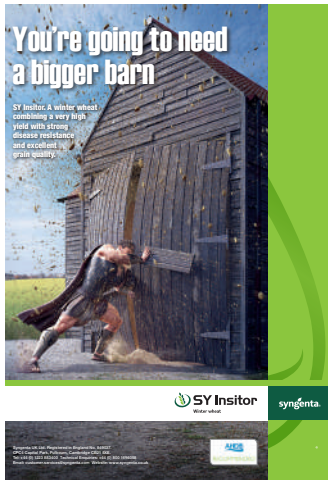
GROWING FOR END MARKETS

SY Insitor
Winter wheat



BREEDING INSIGHTS

SY INSITOR brings an exciting combination of yield and specific weight. As a variety it has proven to perform very well on lighter land, particularly over the last couple of seasons where we have experienced dry springs. We believe this is linked to its aggressive early root development, setting the foundation for resilience throughout the season.

MATT BULL, Syngenta

VARIETY DESCRIPTION

SY INSITOR is a very high yielding hard feed wheat on the AHDB Recommended List. It is a secure, high yielding barn filler that combines high yield and excellent grain quality. This variety has now been proven to deliver on farm and is a strong choice again this season.

Outstanding yields across the whole of the UK.

The highest yielding variety on light land.

Robust *Septoria tritici* resistance.

Very high specific weight.

OWBM resistant.

WHERE TO GROW SY INSITOR

- An exceptional choice for the whole of the UK
- The highest yielding variety available on light land
- Performs outstandingly on both light and heavy lands
- Very high potential 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.

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.

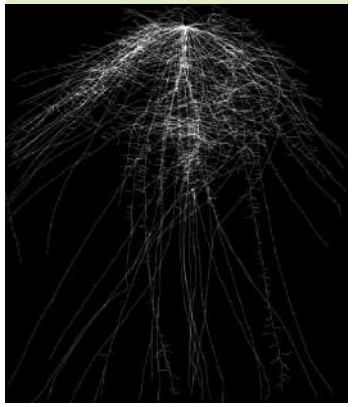
SY INSITOR KEY STATISTICS

UK TREATED YIELD (% CM)	104.3
EAST	104
WEST	105
NORTH	105
LIGHT LAND	106
HEAVY SOILS	104
LATE DRILLED	103
SPECIFIC WEIGHT (kg/hl)	78.9
SEPTORIA TRITICI	6.4
FIRST WHEAT	104
SECOND WHEAT	105

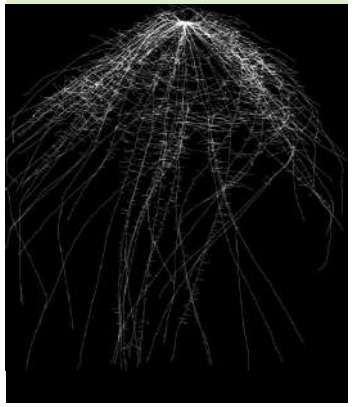
Its early development and speed to GS30 means nitrogen timing is key to feed the rapid early growth.

SY INSITOR IS STILL NUMBER 1 ON LIGHT LAND

SY INSITOR
Total root length: 1405 mm



LEADING COMPETITOR
Total root length: 1243 mm



- SY INSITOR remains the highest yielding variety on light land at 106% of controls
- Rapid developing root system helps facilitate excellent late drilled performance of 103%
- More extensive roots can enhance nutrient and water capture

Source: Independent Seedling Rooting Assessment.
Source: AHDB Recommended List 2023/24.

DISEASE

- SY INSITOR has moderate resistance to rusts. Both brown and yellow rust should be actively managed in order to maximise SY INSITOR yield potential
- Excellent resistance to *Septoria tritici* at 6.4
- SY INSITOR has a strong combination of *Septoria tritici* resistance and treated yield

ORANGE WHEAT BLOSSOM MIDGE

SY INSITOR has resistance to orange wheat blossom midge which simplifies pest management.

OUTSTANDING YIELD POTENTIAL

3RD HIGHEST yielding variety in 2022 Recommended List trials

HIGHEST yielding variety on light soils

EXTREMELY HIGH yields in the North

GRAIN QUALITY

With a specific weight of 78.9 kg/hl and a Hagberg falling number of 279 – SY INSITOR has one of the best quality profiles of the hard feed wheats.

GROWING FOR END MARKETS

Gleam
Winter wheat

VARIETY DESCRIPTION

GLEAM was added to the AHDB Recommended List in 2018 and has proven to be extremely popular. This has been driven by its consistently high yields and proven on farm performance. GLEAM is arguably the most adaptable variety and delivers 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.

OWBM resistant.

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 PROVIDES UNRIVALLED CONSISTENCY

UK TREATED YIELD (% CM)	103.2
EAST	103
WEST	104
NORTH	103
1ST CEREAL	103
2ND CEREAL	103
ALL DRILLING DATES	103
LIGHT SOILS	103
HEAVY SOILS	103

HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

GROWTH HABIT

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.

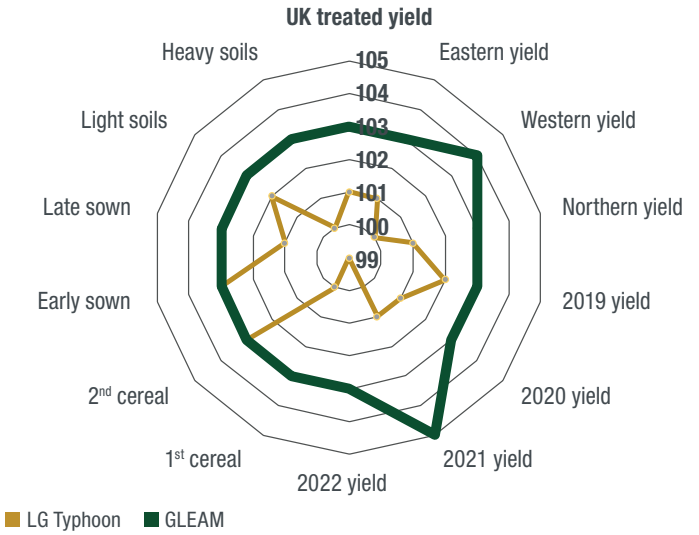
Luckily GLEAM is a short, stiff-strawed variety that has good lodging resistance.

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 ADAPTABILITY: THE VARIETY YOU CAN RELY ON



Source: AHDB Winter Wheat 2023/24 RL.

DISEASE

- GLEAM is seedling susceptible to yellow rust and has moderate adult plant resistance. Yellow rust should be actively managed throughout the growing season in order to maximise GLEAM's potential
- *Septoria tritici* = 5.7
- Consistently high untreated yields

GRAIN QUALITY

GLEAM has reliable grain quality with a good specific weight of 77.3 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

GLEAM is OWBM resistant which means it is a very secure variety if midge numbers are high.

BREEDING INSIGHTS

Very adaptable feed wheat with excellent yield potential across a range of scenarios. Early maturity coupled with OWBM resistance are welcome benefits. Good straw strength and consistent performance on farm are attractive traits.

KATHRYN HAMLEN, Syngenta

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.

syngenta

GROWING FOR END MARKETS

Graham
Winter wheat

VARIETY DESCRIPTION

GRAHAM is a high yielding, hard Group 4 feed winter wheat added to the AHDB Recommended List in 2016 which continues to deliver on farm.

Good resistance to the key diseases *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, it was one of the highest yielding varieties in early drilled trials in 2022 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	6.7
YELLOW RUST	8
RESISTANCE TO LODGING WITHOUT PGR	7
RESISTANCE TO LODGING WITH PGR	8
SPECIFIC WEIGHT (kg/hl)	77.6
EARLY MATURITY	-1

Source: AHDB Recommended List 2023/24.

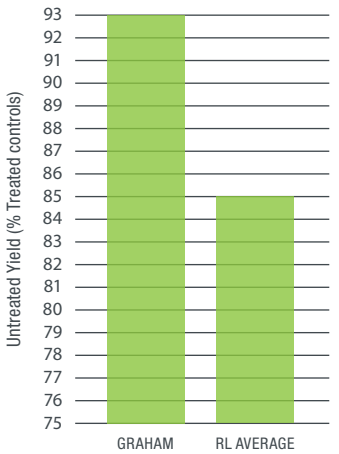
HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

DISEASE

GRAHAM is a low risk variety with excellent resistance to *Septoria tritici* (6.7) 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.

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



Source: AHDB Winter Wheat Recommended 2023/24 RL.

PEST MANAGEMENT

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).

Rated as a -1 (days +/- Skyfall), GRAHAM is the joint earliest maturing winter wheat variety on the Recommended List. Syngenta trials have shown that 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 milling 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 falling number adds security to the crop at harvest, in combination with early maturity this makes GRAHAM a reliable choice for grain quality.

DID YOU KNOW?

GRAHAM has very high yields in the West. Its combination of disease resistance and agronomics make it an outstanding choice for wetter regions.

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

11.1%
PROTEIN CONTENT

281
HAGBERG FALLING NUMBER

77.6
SPECIFIC WEIGHT kg/hl

syngenta®

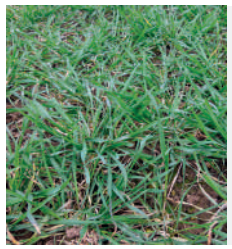
HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

GROWTH HABIT

Understanding variety growth habits is key for canopy management, maximising photosynthesis and yield.

SY INSITOR:

- Quick early development with erect growth habit
- Fast to reach GS30, but slower to reach heading
- The latest Syngenta variety to reach ripening
- Moderate maturity of +1



GLEAM:

- Slow development over winter with a very prostrate growth habit
- Very high tillering ability with excellent tiller retention throughout the season
- Slow to reach GS30, but speeds up once stem extension is reached
- Early maturity

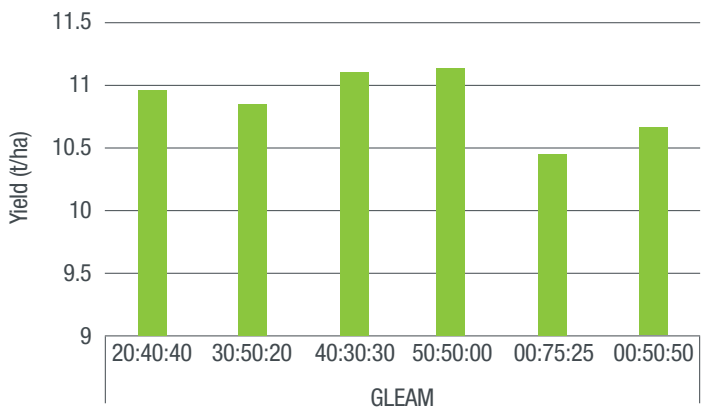
GRAHAM:

- Slow development over winter
- Prostrate growth habit with good ground cover over winter
- Slow to reach GS30
- Quickly moves through GS30-39, resulting in very early maturity

SHABRAS:

- Very quick early development
- Erect, lush growth habit, with good smothering habit for grass weeds
- Will be one of the first varieties to reach GS30

EARLY NITROGEN CRITICAL FOR TARGETING HIGHEST YIELD



- Early nitrogen critical for driving yield in both 2021 and 2022
- GLEAM is a high tillering variety that responds well to early N
- 3 split programme best approach for managing unpredictable weather

APPLICATION	TIMING
1	GS25-29
2	GS30-31
3	GS32

HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

YELLOW RUST

- Yellow rust is a key foliar disease to look out for throughout the season.
- Regular monitoring is recommended to check for early season disease regardless of adult plant resistance rating.

There is a difference between seedling and adult plant resistance:

SEEDLING PLANT RESISTANCE

As a seedling, wheat varieties are either classed as resistant or susceptible to yellow rust.

Several popular wheat varieties on the AHDB Recommended List are susceptible to yellow rust at the seedling stage, including all of the Syngenta varieties.

None of the current Syngenta winter wheat varieties have resistance to yellow rust at the seedling stage, therefore we recommend regular monitoring from planting through to April.

ADULT PLANT RESISTANCE

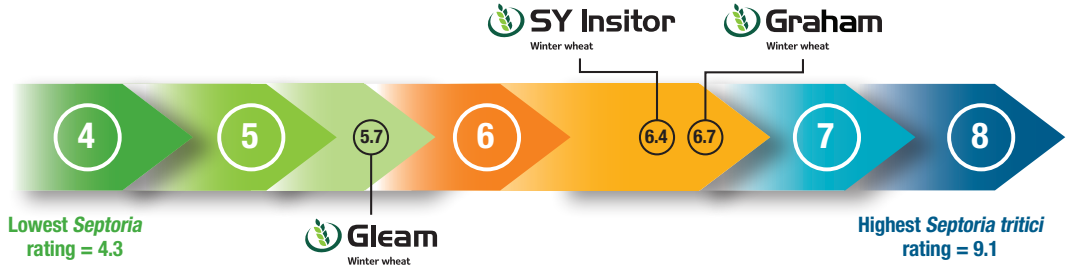
As an adult, wheat varieties are given a resistance rating (1-9) which can be found on the AHDB Recommended List. This differs for each variety, usually this adult resistance is active by GS31 but can be as late as GS39.

If yellow rust is seen, a rust active triazole should be used at T0 and T1 to control early disease before adult plant resistance is operational.

HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

SEPTORIA TRITICI

Still the biggest yield robbing disease of winter wheat, Syngenta recognise that resistance to *Septoria tritici* is incredibly important and understanding varietal differences is key to optimising management throughout the season.



Source: AHDB Recommended List 2023/24.

Suggested *Septoria tritici* Management

	T0	T1	T2
SEPTORIA TRITICI	folpet	ELATUS Era + folpet	New chemistry (+ folpet)

COMING SOON:

Syngenta have a new fungicide in development based on ADEPIDYN® technology that has given excellent control of *Septoria tritici* in trials. Should it get approval it will be an excellent tool in the growers armoury to manage Septoria and other diseases.

HOW TO GET THE MOST FROM YOUR WINTER FEED WHEAT

PESTS

Orange wheat blossom midge has been an issue in certain areas over the past few years.
With cocoons staying highly viable for at least 4 years we could see issues again this coming year.

OWBM RESISTANCE			
GLEAM	✔	SY INSITOR	✔
GRAHAM	✖	SHABRAS	✖

- **Susceptible varieties will benefit from an application of HALLMARK Zeon, when the threshold for OWBM is reached**
- **For feed wheat the threshold = 1 adult in 3 ears**
- **For best results spray before large number of eggs are laid**

CANOPY MANAGEMENT

As yields are pushed higher and ears get heavier, lodging is always a risk. Factors such as early drilling can also increase risk.

Each variety differs in its resistance to lodging:

GRAHAM has stiff straw with good resistance to lodging. It also shows a good response to PGRs in high risk situations.

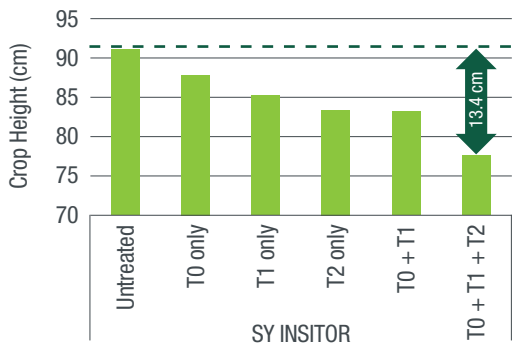
GLEAM carries a lot of tillers, but ear size is relatively small. It has strong root anchorage, and has good resistance to lodging, but again does show a response to PGRs.

SHABRAS has weaker straw than both GRAHAM and GLEAM, and will benefit from a good PGR programme. It develops quickly, so is not suitable for early drilling, and the first T0 timing will be key.

SY INSITOR is a tall variety when left untreated, but shows a very good response to PGRs in both height and lodging reduction.

Trials have shown a programmed approach to PGRs and the use of an ethephon-based T2 is most effective for managing height and risk of lodging.

SY INSITOR IS VERY RESPONSIVE TO PGRS



- SY INSITOR very responsive to PGRs
- T2 timing has biggest impact on crop height (centre of gravity)
- Programmed approach most effective

538 YEN trials show strong association between PGR use and increased yield.

Applying 2 PGRs vs 1 was associated with a yield increase of 1.2 t/ha.

GROWING FOR END MARKETS

HYBRID BARLEY

YOUR HIGH YIELDING FLEXIBLE BARLEY CHOICE

WHICH IS THE BEST VARIETY FOR YOUR FARM?

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.

Syngenta breeding expertise has developed hybrid barley to be dependable and reliable, across all soil types, regions and seasons.

OUR VARIETIES AT A GLANCE

Variety	Treated Yield	Untreated Yield	Specific weight	Ripening	Mildew	Brown rust	Rhynchosporium	Net blotch	Lodging	Light Land	Heavy Land	East	West	North
SY THUNDERBOLT	106	89	70.9	-1	7	6	6	6	5	104	107	106	108	105
SY KINGSBARN	106	85	70.9	0	7	5	6	5	7	105	105	106	106	107
SY KINGSTON	106	88	70.7	-1	8	6	6	6	5	106	104	105	107	106
SY CANYON	105	91	71.7	0	7	6	6	5	5	105	105	106	107	105
SY NEPHIN	104	90	71.4	0	6	–	8	[5]	6	104	[104]	106	[103]	[105]
BELFRY	104	88	69.7	0	6	6	7	5	7	103	104	104	104	104
BAZOOKA	104	84	70.5	0	5	5	7	5	6	103	105	104	103	104

Source: AHDB RL 2023/24. SY ARMADILLO not RL listed, performance data can be found at agrii.co.uk

ALL hybrid barley varieties are BaYMV resistant

HYBRID BARLEY VARIETIES OFFER MUCH MORE THAN HIGH YIELD

- GRASS WEED SUPPRESSION
- STRONG ALTERNATIVE TO 2ND WHEATS
- EFFICIENT NITROGEN UTILISATION
- MORE FLEXIBLE DISEASE MANAGEMENT
- IDEAL ENTRY FOR WOSR
- HIGH SPECIFIC WEIGHT FOR GRAIN CONTRACTS
- EARLY HARVEST GIVES WORKLOAD & CASH FLOW BENEFITS
- DEPENDABLE PERFORMANCE REDUCES RISK

Grass weed suppression is a significant benefit and trials have shown it can add more than £50/ha in recovered yield (0.165 t/ha). Hybrid barley should be an integral part of your integrated 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 hybrid varieties provides greater flexibility for fungicide application timings.

Barley straw is valued more highly than wheat straw. Syngenta trials have demonstrated that even with the lower seed rate used for hybrids they produce a comparable straw yield to conventional varieties. The straw from hybrid barley crops offers a welcome extra income.

Syngenta and ADAS trials have shown hybrid barley can utilise N more efficiently within the plant than conventional varieties. This indicates that hybrid barley is more effective at converting nitrogen into yield than conventional varieties.

SYNGENTA HYBRID BARLEY VARIETIES

Here's a reminder of the main features of the hybrid barley varieties for harvest 2024:

SY Nephin Hyvido®

NEW! High specific weight with outstanding *Rhynchosporium* resistance and shorter straw

SY Thunderbolt Hyvido®

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

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 and wet weather disease resistance

SY Kingston Hyvido®

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

SY Armadillo Hyvido®

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

SY Canyon Hyvido®

Superior grain quality and disease resistance all in one variety

Belfry Hyvido®

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

Hyvido®

syngenta®

GROWING FOR END MARKETS

SY Nephin Hyvido®

HIGH SPECIFIC WEIGHT WITH OUTSTANDING RHYNCHOSPORIUM RESISTANCE AND SHORTER STRAW.

HYVIDO BEATS GRASS WEEDS	Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture
GOOD DISEASE RESISTANCE	Excellent all round disease resistance with very high *Rhynchosporium* protection
LODGING RESISTANCE	A shorter, stiffer strawed hybrid barley
SUPERB GRAIN QUALITY	Outstanding specific weight

BREEDING INSIGHTS

The hybrid barley breeding programme has really targeted specific weight and SY NEPHIN is the latest hybrid barley demonstrating great grain quality and exceptionally high specific weight.

BEN URQUHART, Syngenta

SY Thunderbolt Hyvido®

THE VARIETY WITH CONSISTENTLY HIGH REGIONAL YIELDS. STRONG ON HEAVY LAND, GREAT GRAIN QUALITY AND EARLY TO MATURE.

TOP CHOICE FOR THE EAST AND WEST	Eastern yield of 106 and Western yield of 108
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 an outstandingly high yielding variety showing strong yields across all regions and has performed well on heavy soils. It is also early maturing to help with harvest flexibility.

BEN URQUHART, 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 still the most popular of the Syngenta hybrid barley varieties due to its high and consistent yields and suitability for a wide range of farms and regions.

BEN URQUHART, Syngenta

Bazooka Hyvido®

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.

BEN URQUHART, Syngenta

GROWING FOR END MARKETS

SY Kingston Hyvido®

A STRONG PERFORMER FOR THE NORTH, WEST AND ON LIGHT LAND. EARLY MATURING AND GREAT GRAIN QUALITY.

TOP CHOICE FOR THE NORTH AND WEST	Western yield of 107 and Northern yield of 106
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. Very early ripening provides an opportunity to spread workload at harvest and drill following oilseed rape crops earlier.

BEN URQUHART, Syngenta

SY Armadillo Hyvido®

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.

BEN URQUHART, Syngenta

SY Canyon Hyvido®

AN EXCEPTIONAL COMBINATION OF HIGH YIELD PERFORMANCE, HIGH SPECIFIC WEIGHT AND EXCELLENT DISEASE RESISTANCE WITH HYVIDO GRASS WEED SUPPRESSION.

HIGH YIELD PERFORMANCE	Consistently high UK and regional yields & exceptional light land performance
HIGH SPECIFIC WEIGHT	Very high specific weight for reliable grain quality
EXCELLENT DISEASE RESISTANCE	Very high untreated yields and a good all round disease package provide flexibility with management
HYVIDO BEATS GRASS WEEDS	Grass weed suppression uniquely powered by hybrid vigour and superior plant architecture

BREEDING INSIGHTS

SY CANYON has excelled in trials delivering a combination of high yield performance, high specific weight and the highest untreated yield on the current Recommended List.

BEN URQUHART, Syngenta

Belfry Hyvido®

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.

BEN URQUHART, Syngenta

GROWING FOR END MARKETS

HYBRID BARLEY GIVES FLEXIBLE OPTION FOR WHOLECROP OR BIOGAS USE

Many farmers are now looking to grow hybrid barley as wholecrop for livestock or for biogas production in anaerobic digesters. Hybrid barley provides a flexible option as farmers can decide in season to cut the crop for wholecrop/biogas or to take it through to grain yield.

Hybrid barley has multiple benefits for this market:

- Flexible end use, can be taken to grain if farm requirements change
- High yielding
- High energy and biomass equivalent to hybrid rye
- Early harvest allows for early next crop entry and spreading the harvest load
- Proven increased Nitrogen Use Efficiency (NUE) over conventional varieties
- Additional grass weed suppression built into the genetics

> ‘Hybrid barley provides flexibility to harvest for wholecrop, to top up the AD plant if maize stocks are low, or to harvest it for grain if cereal prices are buoyant and maize stocks are high.’
>
> SUFFOLK BIOGAS PLANT FARM MANAGER

COMING SOON:
BYDV tolerant Hybrid barley Autumn 2023

BYDV CAN HAVE A SIGNIFICANT IMPACT ON YIELD!

An insecticide spray miss in a high pressure BYDV scenario highlights the importance of taking steps to manage the impact of BYDV on your farm

Tolerant varieties work well as part of an integrated BYDV management approach

BYDV tolerant varieties fit well in scenarios where:

- BYDV risk is high
- Early drilling is a requirement
- Insecticide reduction is an ambition

*Rate: 50 mls/ha. If needed and following best practice.

HYBRID BARLEY IS A USEFUL TOOL FOR MANAGING GRASS WEEDS

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 conventional 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”

MORE THAN £50/HA IN INCREASED YIELD DUE TO BLACK-GRASS SUPPRESSION

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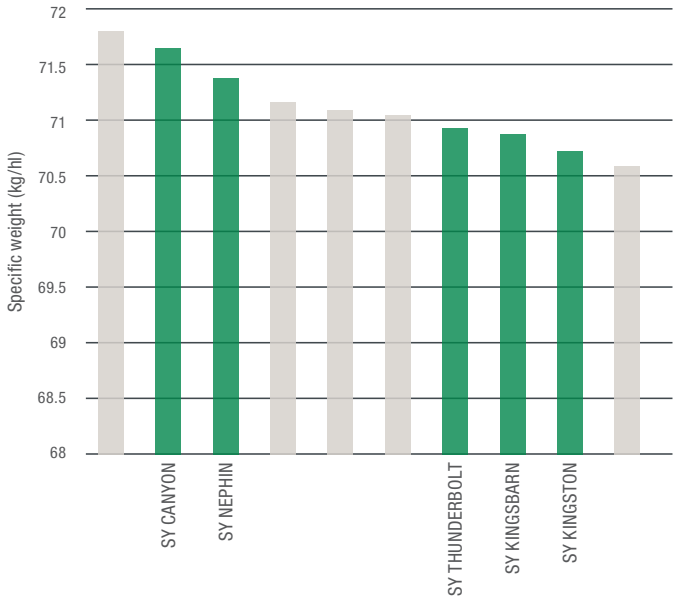
GROWING FOR END MARKETS

ALL HYBRID BARLEY VARIETIES OFFER GOOD SPECIFIC WEIGHT

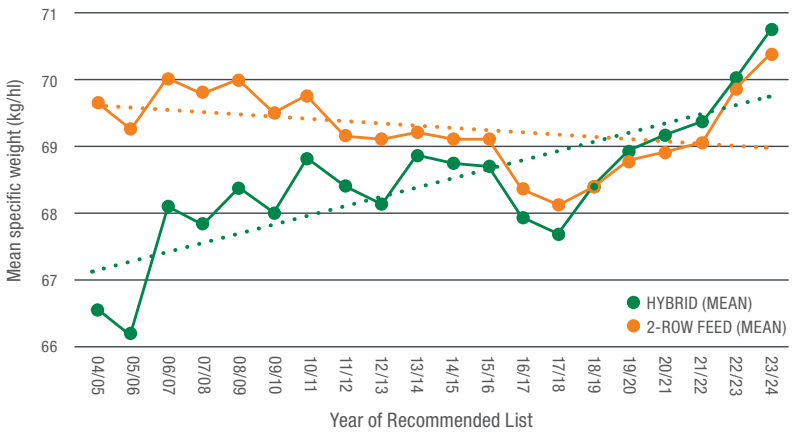


TOP 10 SPECIFIC WEIGHTS INCLUDES 5 HYBRID BARLEY VARIETIES

Source: AHDB Winter Barley Recommended List 2023/24.
Data shown for feed varieties only.

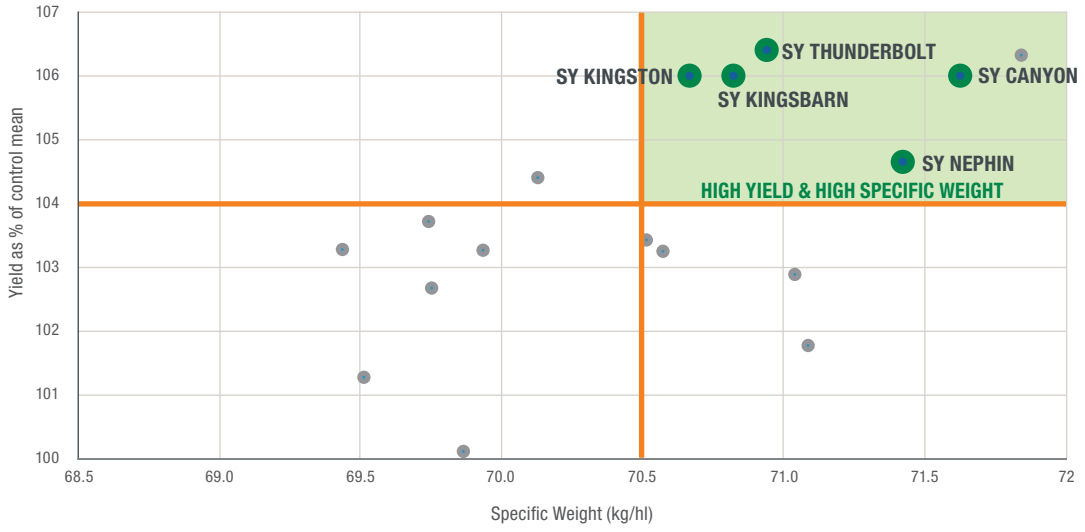
GRAIN QUALITY

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 2023/24.
Data shown for hybrids vs 2-row feed varieties.

A GREAT COMBINATION OF HIGH YIELD AND SPECIFIC WEIGHT



Source: AHDB 2023/24 Winter Barley Recommended List

Hybrid barley leads the way when it comes to yield and quality. Syngenta hybrid barley breeding expertise has targeted high specific weight and new varieties like SY CANYON and SY NEPHIN demonstrate some of the highest specific weights on the current Recommended List.

HYBRID BARLEY IS EASY TO GROW

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

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GROWING FOR END MARKETS

HOW TO GET THE BEST OUT OF YOUR HYBRID BARLEY

Correct nitrogen timing and rate is crucial to get the best results from your hybrid barley variety. Each field and crop should be assessed on the potential yield of the variety, soil type, soil test results etc.

In trials hybrid barley has demonstrated significantly enhanced Nitrogen Use Efficiency (NUE) compared to conventional varieties. Hybrid barley doesn't require more N than other winter barleys and amount should be decided on yield potential and situation vs return on investment.

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

A 2-way split of 50%, 50%, 0% is a suitable alternative if on farm workloads are high.

Please consult a FACTS qualified adviser for specific advice in each field.

SUPERIOR ROOTING STRUCTURE OFFERS AN IMPROVED SCAVENGING ABILITY FOR WATER AND NUTRIENTS COMPARED TO SMALLER ROOTED VARIETIES

ENHANCED TILLERING PROVIDES GRASS WEED SUPPRESSION AND STRONG EARLY HYBRID SPRING GROWTH (SEE PAGE 46)

MANAGING YOUR HYBRID BARLEY CROP DURING THE SEASON

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. The combination of disease resistant varieties and a robust fungicide programme provides maximum protection for your crop.

FUNGICIDE AND PGR TIMINGS

TIMING	FUNGICIDE	PGR	WHY?
T0 (GS30)	KAYAK 0.5-0.7 l/ha (plus partner if mildew or rust established)	MODDUS® 0.1-0.2 l/ha + chlormequat*	Remove overwintered disease in lush crops, protect new growth and support rooting
T1 (GS31-32)	ELATUS Era 0.5-0.6 l/ha (plus folpet or KAYAK depending on disease pressure)	MODDUS® 0.1-0.2 l/ha + chlormequat*	Keep lower leaves green, keep out disease and aid stem strengthening
T2 (GS39-59)	PTZ + SDHI/Strobe + folpet	Ethephon based product**	Drive final yield and maintain specific weight, reduce brackling

*chlormequat at approx. 50% dose rate – various products and formulations exist
** avoid later applications after GS39 especially high risk if leaf sheath has split and ear is visible
Please consult a BASIS qualified advisor for specific advice in each field

HYBRID BARLEY SEED RATE ADVICE

	Earliest drilling date	Sep Wk1	Sep Wk2	Sep Wk3	Sep Wk4	Oct Wk1	Oct Wk2	Oct Wk3	Oct Wk4	Nov Wk1	Nov Wk2	Nov Wk3	Nov Wk4
Hybrid Barley													
HYVIDO	Mid Sept			200	200	200	200	220	220	250	250		
HYVIDO black-grass	Mid Sept			250	250	250	250	275	275	300	300		

The ideal drilling time for winter hybrid barley is mid-September to mid-October. Crops can sometimes be drilled until the end of October and just beyond, if conditions are suitable. The decision to drill should be based on local conditions especially seedbed quality, soil type and weather. Higher seed rates may be appropriate if emergence and establishment are expected to be severely compromised on heavy soils and in stony, cloddy or trashy areas of the field.

NOTES

NOTES

Want to find out more?

Get **cutting edge insights** from our leading experts

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