



GrainCo

seed special

2019 edition

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The North of England & Scotland's leading farmer-owned grain and seed marketing business



**Spotlight
on the wheat
varieties Gleam
and KWS
Extase**

**Vibrance Duo set
to play a key role
this autumn**

**Spotlight on
the new barley
varieties KWS
Gimlet and
LG Flynn**

Yorkshire farmer and host of the Grainco wheat variety trials Stephen Buckle reviews the 2018 results



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Welcome...

...to our new 2019 Seeds Special which I hope you will find a useful tool in helping you to decide which varieties of cereal and oil seed rape in conjunction with the correct seed treatments to consider on your farm for this coming autumn.

We are also very grateful once again to all of our suppliers for their continued support shown throughout the year, whether that be attending our regional farmer workshops, variety farm demonstration days or by providing interesting and relevant articles for this booklet.

Since acquiring the Piercebridge based seed production facility in the summer of 2016, throughput has increased dramatically for both the autumn and spring seasons.

It is always a challenge for the small dedicated team of professionals at the plant to ensure that new season seed which is grown right across our trading area can be harvested, sampled, tested, processed and delivered onto farm within the very tight time frame we know exists within our trading area, time is never on our side.

The option for farmers to take delivery of "specifically grown" overwintered wheat seed during the months of June and July therefore ensuring seed is in the "shed" ready to go has been well received and consequently we are continually investing both within the plant and with staff training to ensure the business can keep growing.

Finally it goes without saying that we remain grateful to our customers from right across our trading area for supporting the business, it's greatly appreciated.

I hope you enjoy the read and we look forward to supplying your seed requirements in the coming months.

Gary Bright
Managing Director

Did you know?

One of the key factors to ensure we continue to provide high quality seed from our Piercebridge Seed Facility can be encapsulated in one word and that's...**CONTROL**.

We place all of our seed crops with growers who have a proven track record for growing quality and importantly clean seed crops from right across the north of England.

We have our own in-house team of Ministry Licensed Crop Inspectors who inspect each and every crop we

produce to ensure growers maintain standards, we remain Black Grass Free.

We have our own in-house Ministry Licensed seed laboratory and analyst.

We own and operate our own bulk haulage fleet.

We control intake, packing and dispatch of all of our seed to ensure timely delivery.

We are proud of the level of service we give.

	EEC Minimum	HVS Standard	Grainco Piercebridge Wheat – Autumn		Grainco Piercebridge Barley – Autumn	
			2017	2018	2017	2018
Minimum Germination	85%	85%	96%	98%	97%	98%
Analytical Purity	98%	99%	99.9%	99.9%	99.9%	99.9%
Guaranteed Blackgrass free?	No	No	CLEAR	CLEAR	CLEAR	CLEAR

Spring photos and diary dates



East Durham Young Farmers visit Piercebridge



A great turnout for the recent "Adapting for Change" Conference held at the Darlington Arena



The recent Oatco Conference held at the Fairmont St Andrews



Looking for the pot of gold! Peter Collins and Stephen Buckle Host of our cereal demonstration plots at Boroughbridge

Variety Demonstration Days

Look out in the coming weeks for details on how to attend our Regional Demonstration Days

Tuesday 12 th - Wednesday 13 th June	Cereals The Arable Event. Boothby Graffoe Lincolnshire
Wednesday 19 th June	Boroughbridge North Yorkshire (YO51 9JN)
Tuesday 2 nd July	Wylam Northumberland
Thursday 4 th July	Balgonie Fife
Thursday 4 th July	East Heselton (YO51 9JN) in conjunction with KWS



New feed wheat ‘Gleams’ with promise for growers facing agronomic challenges

Hard Group 4 winter wheat, Gleam, from Syngenta, continues the company’s track record of bringing varieties to growers that not only offer good resistance to key diseases such as Septoria tritici, but also produce barn-filling yields without being late to mature.

“With an output of 104% of control varieties – equivalent to 11.65 t/ha – Gleam has the second highest UK treated yield for a hard group 4 variety on the 2019/20 AHDB Recommended List,” says Tracy Creasy, Conventional Seeds Marketing Manager at Syngenta. “Looking more locally to its northern performance, Gleam has been the second highest yielding variety in the AHDB RL treated trial at Croft nr Darlington two years running with a yield of 106% of controls in 2018 and had the joint third highest untreated yield at the site, behind its two Syngenta stable mates, Graham and Shabras, alongside KWS Siskin at 105% of untreated controls” Mrs. Creasy added.

Together with its barn filling yields, Gleam also has other advantageous characteristics that make it an ideal variety for growers. It has the flexibility of a wide drilling window and rotational position,

an excellent disease resistance profile, early maturity and stiff straw. All of these make Gleam a strong variety choice this autumn for hard group 4 growers.

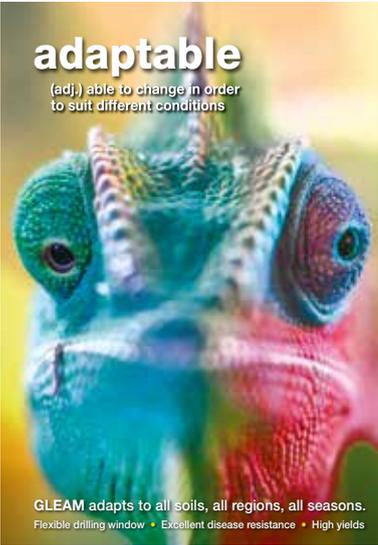
“Gleam has produced high yields consistently over the last three seasons, whilst also performing exceptionally well in all regions, soil types and rotational positions, making it a very versatile variety” explains Mrs. Creasy.

“With its strong Septoria tritici resistance of 6.4 on the AHDB Recommended List, Gleam makes an ideal choice for growers wanting high yield potential plus the reassurance of resilience if fungicide spray timings become compromised. The addition of Orange Wheat Blossom Midge resistance is another key characteristic for the variety. Furthermore, Gleam’s combination of relatively early maturity plus stiff straw makes it a useful choice to ease time pressures at harvest,” says Mrs Creasy.

This, combined with its flexible drilling window (from the first week of September to late November), and its high tillering ability and tiller survival, can be useful in black-grass situations, she adds, by allowing longer windows for stale seedbeds.

“With the prospect of having to delay winter wheat drilling until after peak aphid activity in the autumn, as a way of managing barley yellow dwarf virus risk without neonicotinoid seed treatment chemistry, drilling date flexibility is a useful option to have.

“Overall, Gleam is an ideal variety for growers wanting an easy-to-manage, barn-filling feed wheat with a flexible drilling window.” Mrs Creasy concludes.



adaptable
(adj.) able to change in order to suit different conditions

GLEAM adapts to all soils, all regions, all seasons.
Flexible drilling window • Excellent disease resistance • High yields

Gleam Winter wheat
syngenta

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Gleam exhibiting its high tillering capacity and retention

Autumn 2019 Piercebridge Plant

Winter wheat and winter barley availability portfolio

WINTER WHEAT

GROUP 1	KWS ZYATT, SKYFALL
GROUP 2	KWS EXTASE *NEW*, KWS LILI
GROUP 3	ELICIT, KWS BARREL
GROUP 4 SOFT	KWS JACKAL, LG SKYSCRAPER *NEW*
GROUP 4 HARD	COSTELLO, GLEAM, GRAFTON, GRAHAM, KWS KERRIN, RGT GRAVITY, SHABRAS

OVER WINTERED SEED IS AVAILABLE FOR JUNE – JULY DELIVERY

SUBJECT TO AVAILABILITY PLEASE CHOOSE FROM	COSTELLO, GRAHAM, KWS BASSET, KWS JACKAL, KWS LILI, KWS KERRIN, LG MOTOWN
---	--

WINTER BARLEY

TWO-ROW FEED	KWS CASSIA, KWS GIMLET *NEW*, KWS ORWELL, LG FLYNN *NEW*
HYBRID*	BAZOOKA, KINGSBARN

* DIRECT FROM THE BREEDER





Does the groundwork

before your crop is in the ground

Healthy seed is the first step towards maximising yield. Infected seed can reduce germination, but by targeting disease early on, you can give your spring and winter cereals seed the best chance of establishing a healthy, high-yielding crop.

With Redigo Pro you get the reassurance that you've protected your seed against all major seed- and soil-borne diseases, with the broadest spectrum disease control. Two advanced actives work together, faster, to target fungal diseases like loose smut, offering truly dependable crop establishment right from day one.

Discover all our resources to help give your spring and winter cereal crops the perfect start: cropscience.bayer.co.uk/redigopro

Redigo Pro contains prothioconazole and tebuconazole. Redigo is a registered Trade Mark of Bayer. Use plant protection products safely. Always read the label and product information before use. Pay attention to the risk indications and follow the safety precautions on the label. For further information, including contact details, visit www.cropscience.bayer.co.uk or call 0808 1969522. © Bayer CropScience Limited 2018



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Seed treated with Radiate establishes faster, has greater root mass, and stands stronger = less lodging, improved growth and enhanced drought tolerance.

For cereals and oilseed rape.

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DE SANGOSSE

Autumn seed treatment summary

	Redigo Pro (Single Purpose) Actives: Prothioconazole + Tebuconazole	Rancona i-Mix (Single Purpose) Actives: Ipconazole + Imazalil	Vibrance Duo Actives: Fludioxonil + Sedaxane	Latitude Actives: Silthiofam	Austral Plus Actives: Fludioxonil +Tefluthrin	New Manganese Solution	Radiate Zinc Acetate
Crop	All Cereals	Wheat & Barley	Wheat	Wheat & Barley	All Cereals	All Cereals	All Cereals
Disease							
Fusarium	●	●	●		●		
Loose Smut	●	●	●				
Bunt (seed borne)	●	●	●		●		
Bunt (soil borne)	●	●	●		●		
Leaf Stripe	●	●			●		
Covered Smut	●				●		
Seedling Net Blotch	●				●		
Ergot ***	●	●					
Seedling Blight	●						
Blue Mould				●			
Take-all							
Pests							
Wireworm					●		
Wheat Bulb Fly					●		
Nutrition							
Early Manganese Deficiency						●	
Enhanced Root Development & Establishment			●				●

*** Reduced germination of treated Ergot particles.

Vibrance Duo

A combination of Fludioxonil and Sedaxane, a new SDHI from Syngenta. Improves speed of establishment and boosts early root development. Particularly useful for later sowings, lighter soils and 2nd wheat's and other situations where the improved root health will benefit moisture and nutrient uptake. Trials have consistently shown an increase in wheat ear numbers, tillering, root and foliage weight.

Latitude

Always applied with a single purpose seed treatment. Use on 2nd and 3rd wheat's (white crops) where take-all risk is high. Works by providing a zone of

protection around the seedling delaying infection from the take-all fungus within the soil to the newly developing roots. The active remains at the site of action, even if rainfall follows drilling. This leads to better root development and helps to maintain root efficiency well into May/ June. Reduces secondary symptoms such as stunting and whiteheads.

Manganese

Helps to control Manganese deficiency in soils by providing the germinating seedling with essential Manganese during the early critical establishment phase. Important in helping to retain barley tillers, improved establishment and winter hardiness.

Radiate

A patented Zinc nutrient Complex which improves plant establishment by directly targeting auxin production within the seedling by supplying a blend of nutrients known to stimulate root development allowing the plant to utilise nutrients and moisture in the surrounding spoils.

Particularly useful on lighter soils and 2nd wheat's and any situation where the crop is liable to come under stress.

Austral Plus

Seed and soil borne disease protection plus an insecticide to protect against wireworm and wheat bulb fly.

Winter wheat set to benefit from a Vibrance start

Being unable to use a neonicotinoid-containing seed treatment against BYDV-carrying aphids and slug damage will pose a challenge for winter wheat growers this autumn. However, there are things that can be done.

Whether you are looking to reduce BYDV risk by delaying the drilling date, or are trying to make crops more resilient to slug damage, getting winter wheat to establish rapidly is essential, says Kat Allen, Seedcare Campaign Manager for Syngenta.

Indeed, it will be even more important this autumn with the loss of neonicotinoid seed treatment chemistry in winter cereals, she stresses.

“If you are facing a BYDV risk, it may not be something you would want to do by choice, but delaying drilling until after the peak aphid activity in autumn will reduce the risk of infection,” says Ms Allen. “Therefore, it will be an important first step in managing the problem, even if using an aphicide.

“However, if you do delay drilling, then this makes doing everything you can to achieve rapid crop emergence all the more important.

“Similarly if facing slug problems, as well as using slug pellets, then getting plants well-established in the shortest time gives them a better chance of tolerating damage. “In essence, achieving rapid crop establishment should become part of the mindset in both of these scenarios,” she adds.

Vibrance Duo

That said, just because a combined neonicotinoid + azole seed treatment can no longer be used on winter wheat seed, it doesn’t mean that a seed treatment should be omitted from the crop entirely, points out Ms Allen. Far from it, she stresses.

“You still need to manage important fungal diseases that threaten establishment,” says Ms Allen, “such as Fusarium.

“Many of these diseases haven’t been seen for some time, simply because they have been controlled by fungicide seed treatments. It is vital not to take this control of these hidden diseases for granted. However, what you definitely do not want is a seed treatment that will delay crop emergence.

“A very important technique to be aware of this coming autumn is the role that the seed treatment **Vibrance Duo** can play in getting crops established rapidly.

“Approved for use on seed of winter wheat, winter triticale, winter rye and spring oats, **Vibrance Duo** trials have shown excellent control of Seed and Soil-Borne diseases. However, we have found repeatedly that it gets plants out of the ground faster compared with a single-purpose seed dressing, producing a higher number of plants with increased biomass and more tillers. Importantly, it also increases root length and weight.

“Crucially, these effects have been seen irrespective of when the crop was drilled, though the biggest benefits have been when establishment and rooting became more critical with later drilling.

“Healthier roots are essential to enable crops to fully utilise what the soil has to offer. As well as providing a larger surface area for absorbing water and nutrients, deeper roots can aid plant vigour and stress tolerance and, ultimately, support higher crop outputs,” she adds.



Risk compensation

From a practical viewpoint, the big unknown factor when drilling winter cereals, says Ms Allen, is how kind the weather will be to crop growth going into winter. Later-drilled winter wheat has less time to develop decent root structures and tiller numbers than earlier-planted crops, she says. It is also slower-growing and more susceptible to seedling diseases because it is going into colder, wetter soils, so you have to compensate for these risks, she notes.

“If you achieve a better-established crop, it will be better able to manage the challenges it faces, such as attack by slugs.

“As part of the development of **Vibrance Duo**, as well as conducting extensive trials, **Syngenta** has also been carefully monitoring how it performs in real world farm situations. Crop growth information has been collated from farms around the country where the seed treatment has been used.

“We have seen that root mass has been increased to as much as double that seen with a standard triazole fungicide seed treatment.

“This reinforces previous trials findings where **Vibrance Duo** has repeatedly produced an increase in root length compared with other seed treatment technology, as well as subsequent increases in yield.

“It has also produced higher plant counts and better tillering, as well as faster crop establishment.

“We’re now at a stage where good crop establishment is about more than simply improving above-ground emergence. It’s also about setting up the crop to put down healthy root structures to get the most out of the soil.

Yield improvements

Looking closer at results from trials and on-farm comparisons, Ms Allen says **Vibrance Duo** has been found to deliver substantial improvements in yield.

“Its yield benefit over a standard triazole fungicide seed treatment doubled from 148 kg/ha for crops drilled before mid-October to 296 kg/ha for crops drilled after mid-October.

“It also averaged around 300 kg/ha extra yield compared with the standard seed treatment on light land, and nearly 600 kg/ha extra over the standard treatment on heavy land split-fields drilled after mid-October.

“On one site drilled into a very poor seedbed where slug pressure was high, **Vibrance Duo** gave more than a tonne per hectare yield advantage.

“All these results provide a great deal of confidence about using the seed treatment. It can be viewed as an integral part of the process for achieving well-established crops, which also includes techniques such as creating a good seedbed to produce good seed to soil contact for efficient moisture uptake, and the use of the appropriate seed rate for the variety and drilling date used.”

What is Vibrance Duo?

Combining fludioxonil, the active ingredient in the well-proven seed treatment **Beret Gold**, with a modern SDHI active ingredient, sedaxane, **Vibrance Duo** brings an added dimension to crop establishment.

While **Beret Gold** is well-known for excellent establishment, **Vibrance Duo** is also becoming noted for improved rooting, so it offers added benefits.

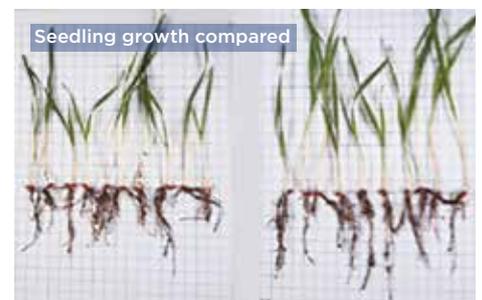
In winter wheat, **Vibrance Duo** controls diseases including seed borne *Fusarium culmorum*, snow mould, common bunt and loose smut. Significantly, sedaxane has also been found to have activity against *Rhizoctonia* – a potentially underestimated pathogen affecting cereals in parts of the UK.

While sedaxane moves to form a zone of protection around the seed, roots and stem base, fludioxonil disinfects the seed and protects the coleoptile, so diseases are controlled both on the seed surface and deeper within the seed.

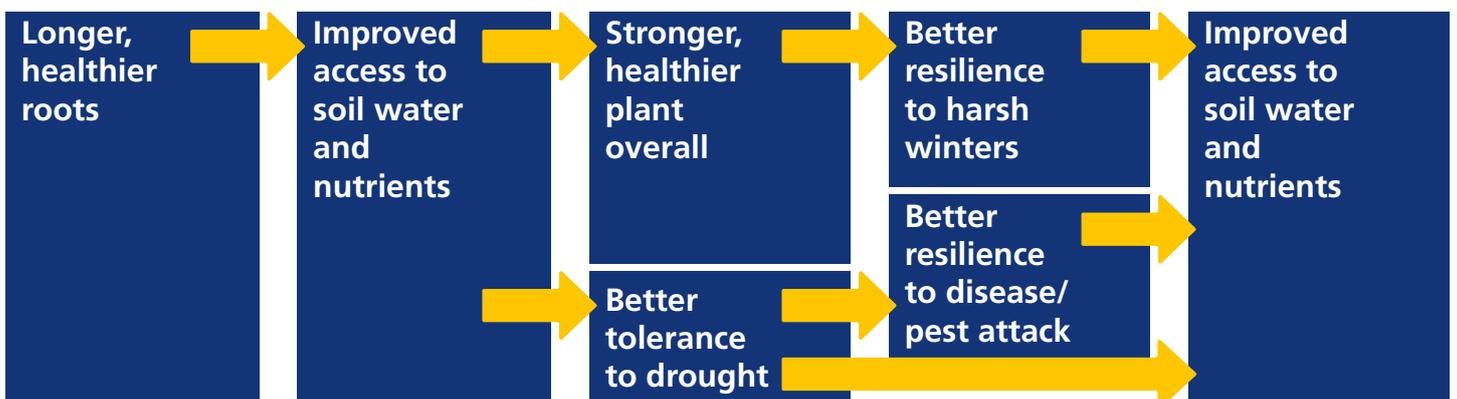
For further information visit: www.syngenta.co.uk/vibrance-duo

Vibrance Duo benefits

- Broad-spectrum control of key establishment diseases
- Enhanced root growth
- Excellent crop safety, rapid emergence and improved plant stand
- Repeated, substantial improvements in yield



On-farm crop establishment comparisons have confirmed substantial root growth improvements with new SDHI-based seed treatment, **Vibrance Duo** (right of picture)



2019 winter wheat variety comments

NABIM GROUP 1 – BREADMAKING WHEAT

KWS ZYATT

KWS

Hereford x Quartz

UK Yield 101% East 100% North 99%

UK SEED MARKET SHARE AUTUMN 2018 PLANTING 6.1%

UK's highest yielding Group 1 bread making wheat comes as expected with excellent grain quality coupled with very good all round disease resistance. This is further highlighted by its Pch1 eyespot resistance which may go some way to explaining its excellent second wheat performance. With its early maturity and medium short stiff straw you can see why it's attracting interest from northern growers looking for a consistent variety.

1 ST Wheat	100%
2 ND Wheat	101%
Light Soils	99%
Heavy Soils	101%
Specific Weight	78.3 KG
Maturity	0
Protein Content	12.1%
Hagberg Falling Number	283
Untreated Yield	86%

OWBM Resistance	NO
Mildrew	7
Yellow Rust	8
Brown Rust	6
Septoria Tritici	6.4
Fusarium	6
Eyespot	7
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	8

SKYFALL

RAGT

OWBM Resistant



C4148 x Hurricane

UK Yield 99% East 99% North 98%

UK SEED MARKET SHARE AUTUMN 2018 PLANTING 9.4%

This bearded wheat continues to be the UK's most popular variety for the 3rd year running. It is the only recommended winter bread-making wheat with orange wheat blossom midge (OWBM) resistance, backing up a good agronomic package including very stiff straw and Pch1 eyespot resistance. A fast developer so is better suited to the traditional mid-late September drilling slot.

1 ST Wheat	99%
2 ND Wheat	99%
Light Soils	98%
Heavy Soils	99%
Specific Weight	78.6 KG
Maturity	0
Protein Content	12.1%
Hagberg Falling Number	293
Untreated Yield	81%

OWBM Resistance	YES
Mildrew	5
Yellow Rust	5
Brown Rust	8
Septoria Tritici	5.9
Fusarium	7
Eyespot	6
Resistance To Lodging (-PGR)	8
Resistance To Lodging (+PGR)	8



DEMANDED BY THOSE WHO KNOW WHICH SIDE THEIR BREAD'S BUTTERED



THE UK'S NUMBER ONE VARIETY COMBINING YIELD AND QUALITY, 'THE COMPLETE PACKAGE'.

CHARACTERISTICS:

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- Superb baking performance
- OWBM and Pch1 resistant
- Delivering for farmers and millers

It isn't by chance we are Europe's number one cereal breeder supplying seed across the world. Consistently developing and growing outstanding varieties such as RGT Skyfall responsible for exceptional yields which deliver 'complete package' features and characteristics demanded by farmers and end users. Discover seed varieties you can have total confidence in. Discover how you can grow to expect the best.



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The Dynamic Wheat that's out of this world!



KWS ZYATT

- The UK's highest yielding Group 1 breadmaking wheat
- Excellent disease resistance including good Septoria and Pch1
- Superb second wheat



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www.kws-uk.com

SEEDING THE FUTURE SINCE 1056



Latitude (silthiofam) seed treatment

Of course when thinking of growing a second or third cereal it is of paramount importance to consider the yield robbing disease take-all.

The issues aren't just yield loss, its impact extends to nitrogen uptake, grain fill and subsequent quality, which can all affect the marketability of the crop. The take-all fungus is present in nearly all soils and is endemic to the UK.

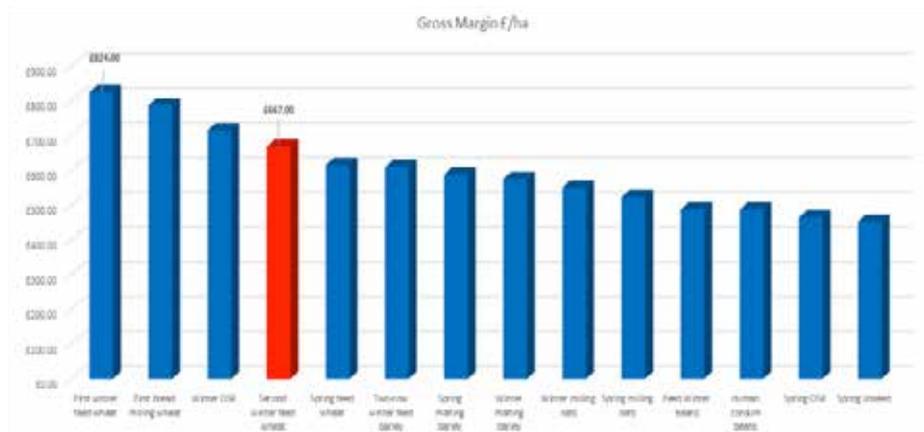
The level of take-all risk can vary from year to year and will be dependent on a variety of factors, the diagram (below) illustrates how the relative influence that each of those factors has on take-all risk.

The initial symptoms of take-all are the blackening and stunting of the root system, secondary symptoms are very easy to see later in the year with stunted plants and 'whiteheads' clearly visible.

Latitude (silthiofam) is the only specialist seed treatment approved for the control of take-all, making it the number one seed treatment choice when thinking about second and third cereal crops.

Latitude should be applied alongside a recognized single purpose dressing.

Latitude is a well established treatment and is backed by many years of trials



(above) Second (and third) wheats are still an incredibly profitable option in your rotation as the gross margin graph shows.

across many soil types and a huge variety of climatic conditions.

The data shows that in a second wheat when the take-all index is rated as medium then the seed treatment offers a yield benefit of 0.55t/ha. This proven yield benefit can easily be calculated into a gross margin return on your investment in a seed treatment. The below website offers a simple calculator that allows you to input your seed rate, cost of **Latitude** and value of your wheat crop to see how much you benefit:

www.certiseurope.co.uk/latitude

Talk to your **Grainco** representative today about the benefits **Latitude** can bring you across a wide variety of cereal situations.



SOIL TYPE
16%

SOWING DATE
17%

CROP ROTATION
33%

CLIMATE
34%

KWS Extase: the winter wheat to cut fungicide bills

The winter wheat with the strongest resistance to Septoria tritici ever seen, consistent yields that put it firmly in the top order and a suite of agronomic scores that combine early maturity with stiff straw, are set to make KWS Extase a good fit on every farm.

KWS Extase (Boisseau x Solheio) has attracted strong interest for its unprecedented resistance to Septoria tritici. In untreated trials it has produced yields of 7% higher than Graham, the next best performing variety.

KWS Extase is a French-bred quality wheat that is performing well across north west Europe. It brings new genetics to the UK, but just as with Skyfall, it fits well with the conditions we have. While its Septoria tritici resistance score of 8.1 is the first for a UK-listed variety, its performance owes much to its all-round disease resistance with impressive scores for both yellow rust (9) and brown rust (7) while fusarium ear blight is equally noteworthy at a 6.

Its outstanding combination of disease resistance offers growers opportunity to save on fungicide spend compared with a more input-heavy variety, such as KWS Santiago. The extent of the savings that can be made will depend on the season, but agronomists who have seen it in trial conservatively estimate savings of £15-20/ha are possible.

KWS Extase has the highest Hagberg Falling Number of 307 seconds and heaviest specific weight of 78.6kg/hl of any Group 2 variety. Its protein is consistent with that of other varieties in this group at 12.6%.

Strong agronomic appeal

Of equal importance to growers is straw strength and maturity and KWS Extase performs strongly here too. In both instances it is equal to that of Skyfall which will support its appeal in the north-east region while its earliness to mature and good resistance to wet weather diseases will further raise its allure.

Its speed of movement through stem extension is faster than average and closer to that of varieties such as Gallant so growers will want to prioritise it ahead of others when planning spring fertiliser schedules. At 89 cm it is 4 cm taller than the average of varieties on the Recommended List.

KWS EXTASE IN NUMBERS

Untreated yield (% treated controls)	95
Mildew	6
Yellow rust	9
Brown rust	7
Septoria tritici	8.1
Eyespot	4
Fusarium	6
Lodging (- PGR)	7
Lodging (+ PGR)	8
Height (cm)	89
Ripening (days, +/- JB Diego)	0

Source: AHDB 2019-20 Recommended List

GRAIN QUALITY

	KWS Extase	KWS Siskin
Protein (%) – from milling trials	12.6	12.8
Hagberg Falling Number (secs)	307	300
Specific Weight (kg/hl)	78.6	77.5
UKP	Y	Y



KWS Extase (left) demonstrating its Septoria tritici resistance under high pressure at an irrigated wheat variety trial near Cambridge. KWS Santiago (right) in the same trial is showing the signs of strain. Both pictures taken on 17th July 2018.

2019 winter wheat variety comments

NABIM GROUP 2 – BREADMAKING POTENTIAL

PROVEN PERFORMER

KWS LILI

KWS

Horizon x Cordiale x Timaru

UK Yield 100%

East 100%

North 103%

UK SEED MARKET SHARE AUTUMN 2018 PLANTING 2.1%

This high tillering consistent variety was once again our biggest selling variety last autumn. It is well-suited to the Northern region where it can be drilled early and nicely fits that first wheat slot. It offers good grain characteristics with short, stiff straw and comes with a good set of disease ratings.

1 ST Wheat	101%
2 ND Wheat	99%
Light Soils	102%
Heavy Soils	101%
Specific Weight	77.5 KG
Maturity	+2
Protein Content	11.4%
Hagberg Falling Number	303
Untreated Yield	70%

OWBM Resistance	NO
Mildrew	8
Yellow Rust	7
Brown Rust	4
Septoria Tritici	5.9
Fusarium	6
Eyespot	5
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	8

NEW – LIMITED AVAILABILITY

KWS EXTASE

KWS

Boisseau x Sorehio

UK Yield 101%

East 101%

North 102%

From the KWS Momont stable in France, this new variety offers growers unrivalled levels of disease resistance. In fact it's the first variety to have a score of 8 for Septoria tritici, culminating in the highest untreated yield available on the AHDB RL, a full 7% ahead of its nearest competitor. This taller, stiff strawed variety is best suited to the main drilling window i.e. mid-September due to its vigorous autumn growth habit.

1 ST Wheat	101%
2 ND Wheat	101%
Light Soils	103%
Heavy Soils	101%
Specific Weight	78.6 KG
Maturity	0
Protein Content	11.7%
Hagberg Falling Number	307
Untreated Yield	95%

OWBM Resistance	NO
Mildrew	6
Yellow Rust	9
Brown Rust	7
Septoria Tritici	8.1
Fusarium	6
Eyespot	7
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	8

NABIM GROUP 3 – BISCUIT WHEAT

KWS BARREL

KWS

OWBM Resistant



Viscount x Bantam

UK Yield 101%

East 101%

North 105%

UK SEED MARKET SHARE AUTUMN 2018 PLANTING 4.6%

The highest yielding biscuit wheat and the highest yielding soft wheat in the northern region, explains why this variety increases its market share year on year. Short with stiff straw and good grain characteristics, its disease resistance package is mixed however with a strong yellow rust score of 9, but its Septoria tritici resistance is low so consequently needs monitoring. It does however have the added bonus of being OWBM resistance.

1 ST Wheat	102%
2 ND Wheat	101%
Light Soils	103%
Heavy Soils	101%
Specific Weight	77.3 KG
Maturity	+1
Protein Content	12.2%
Hagberg Falling Number	227
Untreated Yield	72%

OWBM Resistance	YES
Mildrew	6
Yellow Rust	9
Brown Rust	5
Septoria Tritici	4.5
Fusarium	6
Eyespot	4
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	8

ELICIT

Elsom

OWBM Resistant



Cassius x Viscount

UK Yield 101%

East 101%

North 102%

UK SEED MARKET SHARE AUTUMN 2018 PLANTING 4.2%

Now in its 2nd year of recommendation this variety offers northern growers a high yield potential backed up with an excellent all round disease resistance package which includes scores of 9 for yellow rust and 6 for Septoria tritici. Suited to either rotational position, it comes with medium height, stiff straw, good grain characteristics and is best suited to the main drilling window.

1 ST Wheat	101%
2 ND Wheat	101%
Light Soils	101%
Heavy Soils	100%
Specific Weight	77.3 KG
Maturity	+1
Protein Content	11.5%
Hagberg Falling Number	222
Untreated Yield	82%

OWBM Resistance	YES
Mildrew	6
Yellow Rust	9
Brown Rust	7
Septoria Tritici	6
Fusarium	7
Eyespot	4
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	8

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2019 winter wheat variety comments

GROUP 4 – SOFT WHEATS

KWS JACKAL

KWS

OWMB Resistant



Santiago x Istabraç

UK Yield 102%

East 103%

North 104%

With a specific Northern recommendation, this high tillering variety is one of the highest yielding varieties available for the northern region, 6% in fact above **Revelation** and has the ability to be drilled relatively early. Suitable for distilling it has medium height, stiff straw and no major disease weaknesses. It will perform in any situation and its second wheat performances are up there with the best of the barn fillers.

1 ST Wheat	102%
2 ND Wheat	103%
Light Soils	103%
Heavy Soils	102%
Specific Weight	76.1 KG
Maturity	+1
Protein Content	10.9%
Hagberg Falling Number	177
Untreated Yield	77%

OWBM Resistance	YES
Mildrew	7
Yellow Rust	9
Brown Rust	5
Septoria Tritici	4.9
Fusarium	6
Eyespot	4
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	7

LG SKYSCRAPER

Limagrain

OWMB Resistant



Cassius x Santiago

UK Yield 106%

East 106%

North 104%

UK SEED MARKET SHARE AUTUMN 2018 PLANTING 4.2%

The highest yielding wheat variety on the new AHDB RL, the highest yielding 1st and joint highest yielding 2nd wheat, plus the highest yielding on both light and heavy soils. A taller variety which responds well to PGR treatments, it is best suited to the main drilling window. Throw in early maturity, good grain characteristics and a solid disease resistance profile ensure this variety is bound to attract interest from growers.

1 ST Wheat	106%
2 ND Wheat	105%
Light Soils	105%
Heavy Soils	106%
Specific Weight	77.2 KG
Maturity	0
Protein Content	11.2%
Hagberg Falling Number	221
Untreated Yield	84%

OWBM Resistance	YES
Mildrew	7
Yellow Rust	8
Brown Rust	5
Septoria Tritici	5.2
Fusarium	6
Eyespot	5
Resistance To Lodging (-PGR)	7
Resistance To Lodging (+PGR)	7

NEW

The call of the yield!

KWS JACKAL

- Highest yielding distilling variety for the North
- Good disease ratings with OWBM resistance
- Short-medium height with stiff straw

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2019 winter wheat variety comments

GROUP 4 – HARD WHEATS

HUGE SPEC WEIGHT!

COSTELLO

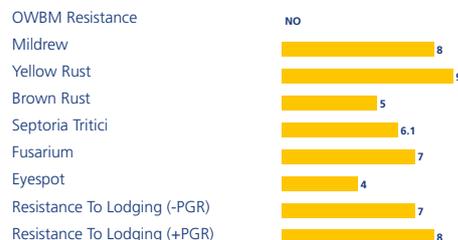
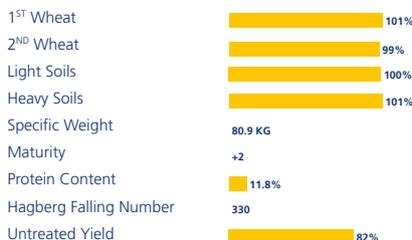
UK Agent Aenova

Timaru x W151

UK Yield 101% East 101% North 100%

UK seed markets share autumn 2018 planting 5.5%

Despite not being perceived as a high yielder, this variety continues to be very popular and consistently performs well at our demonstration sites at Boroughbridge and Wylam. A short stiff strawed variety that can be drilled reasonably early in the north comes with exceptional grain quality including the best specific weight of any variety on the RL, a valuable asset in a challenging season. Excellent disease resistance profile.



TOP PICK

GLEAM

Syngenta

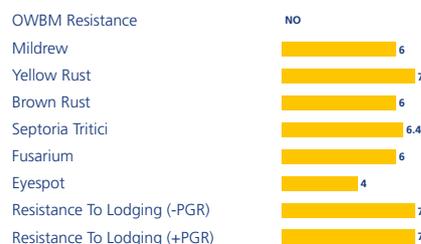
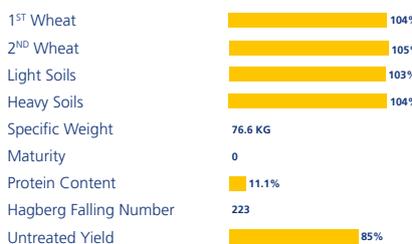
Kielder x Hereford

UK Yield 104% East 104% North 104%

UK seed market share autumn 2018 plantings 4.7%

A total sell out last season, this variety features some very useful attributes that will certainly be of interest to many growers. Not least it's consistency of performance in either rotational slot, high yield potential, solid disease resistance coupled with OWBM resistance for added security and stiff straw. A high tiller it offers flexibility at drilling times i.e. first week September until late November.

Gleam is an ideal variety for growers wanting an easy-to-manage, barn-filling feed wheat with a flexible drilling window.



PLEASE ORDER EARLY

GRAFTON

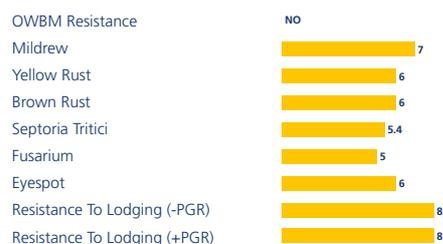
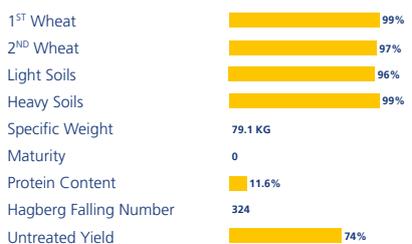
KWS

Cordiale x W07

UK Yield 99% East 99% North 101%

* All data shown taken from 2017/18 AHDB RL

No longer listed on the new AHDB RL, this niche variety however will maintain its place on many farms due in no small part to its suitability for early drilling and is also one of the earliest to harvest. Its combination of excellent grain quality coupled with short very stiff straw makes it an ideal variety for very fit soils. A shy tiller, growers should look to lift seed rates accordingly. Growers are advised to order early to catch production.



EXCELLENT DISEASE RESISTANCE

GRAHAM

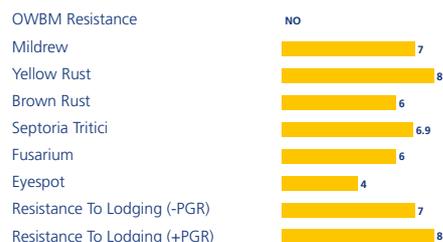
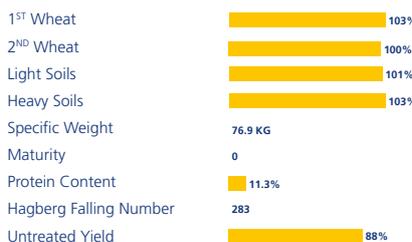
SYNGENTA

Primo x Expert

UK Yield 102% East 101% North 100%

UK seed market share autumn 2018 plantings 8.4%

The UK's 2nd most popular wheat variety last season and ideally suited to the first wheat slot. This medium tall, stiff strawed variety offers growers consistently high yields coupled with good grain quality. It is suitable for early drilling and importantly offers growers early maturity at harvest. In addition it has an exceptional untreated yield due in part to an impressive 6.9 rating for the yield robbing disease Septoria tritici.



2019 winter wheat variety comments

A TRUE BARN FILLER

KWS KERRIN

KWS

OWMB Resistant



Santiago x Istabraç

UK Yield 105%

East 105%

North 107%

UK seed markets share autumn 2018 planting 7.0%

This high tillering variety was in huge big demand last year and its northern yield is virtually unrivalled and has to be a serious contender for farmers wishing to maximise their yields. It is rotationally very versatile, in fact it is the second highest yielding first wheat and joint highest second wheat available and has topped our continuous wheat demonstration site at Boroughbridge in North Yorkshire two years running!

1 ST Wheat		104%	OWBM Resistance	YES
2 ND Wheat		105%	Mildrew	
Light Soils		104%	Yellow Rust	
Heavy Soils		103%	Brown Rust	
Specific Weight	76.5 KG		Septoria Tritici	
Maturity	+1		Fusarium	
Protein Content	10.7%		Eyespot	
Hagberg Falling Number	150		Resistance To Lodging (-PGR)	
Untreated Yield		81%	Resistance To Lodging (+PGR)	

GOOD 2ND WHEAT

SHABRAS

Syngenta

Hereford x Cassius

UK Yield 103%

East 103%

North 104%

UK seed markets share autumn 2018 planting 3.3%

Ideally suited to the traditional mid-September drilling slot it has a very quick spring regrowth and a very erect growth habit unlike most other varieties. It fits nicely into either rotational position, however it will produce its best potential in that important 2nd wheat position. It has a very solid set of disease resistance ratings, not the stiffest of varieties so needs managing accordingly.

1 ST Wheat		103%	OWBM Resistance	NO
2 ND Wheat		104%	Mildrew	
Light Soils		103%	Yellow Rust	
Heavy Soils		102%	Brown Rust	
Specific Weight	76.4 KG		Septoria Tritici	
Maturity	0		Fusarium	
Protein Content	11.2%		Eyespot	
Hagberg Falling Number	219		Resistance To Lodging (-PGR)	
Untreated Yield		82%	Resistance To Lodging (+PGR)	

BIG YIELD POTENTIAL

RGT GRAVITY

RAGT

OWMB Resistant



Scout x Oakley x Santiago

UK Yield 104%

East 104%

North 105%

UK seed markets share autumn 2018 planting 6.9%

Taking a near 7% market share in its first year of release, this high input, high output variety is capable of producing some big yields. Producing a large canopy and large flag leaf, it is best suited to the traditional mid-late September drilling slot. Medium height, medium stiff strawed, it suits all soil types and rotational slots, but it does appear to be finding particular favour as a second wheat.

1 ST Wheat		104%	OWBM Resistance	YES
2 ND Wheat		105%	Mildrew	
Light Soils		104%	Yellow Rust	
Heavy Soils		104%	Brown Rust	
Specific Weight	76.4 KG		Septoria Tritici	
Maturity	+1		Fusarium	
Protein Content	11.3%		Eyespot	
Hagberg Falling Number	211		Resistance To Lodging (-PGR)	
Untreated Yield		80%	Resistance To Lodging (+PGR)	



Introducing LG Flynn – a true farmer friendly variety

LG Flynn is an exciting new 2-row winter feed barley added to the AHDB Recommended List 2019/20. LG Flynn offers a step up in yield for 2-row barley with additional agronomic benefits that will ensure market uptake, by both the trade and grower.

The variety sits alongside KWS Gimlet and LG Mountain at 104% on the new Recommended List and has shown good performance across regions, seasons and soil types - giving growers confidence of its proven consistency. This consistency of performance can be attributed to its high untreated yield, good straw attributes and its ratings for Brown Rust, Rynchosporium and Net Blotch.

LG Flynn is a tall, stiffer strawed variety that responds well to PGR application. It demonstrates slower plant development in the spring with a later harvest maturity of +1.

LG Flynn offers one of the best specific weights on the Recommended List with screenings % similar to KWS Cassia – a variety which has secured market placement from the reputation of good grain quality on farm. Its high yield potential, solid agronomic characteristics and very good grain quality help ensure good performance on farm and a presentable grain quality that traders and growers appreciate.

LG Flynn delivers

To sum up - LG Flynn has all the desirable agronomic characteristics, combined with excellent grain quality to make it a 'Classic' variety, ensuring on-farm security for achieving full yield potential.



AHDB RECOMMENDED

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• 2-row feed barley • Stiff straw • Very high specific weight

LG

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Limagrain

2019 winter barley variety comments

PLEASE ORDER YOUR BARLEY REQUIREMENTS EARLY

CONSISTENT PERFORMER

KWS CASSIA

KWS

Two Row

Carat x Saffron

UK Yield 98%

East 98%

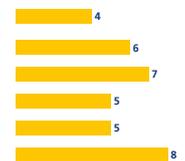
North 98%

First recommended in 2010, this variety continues to sell out each year due to its consistency of performance irrespective of seasons and was the 3rd most popular two-row variety last season. A medium-tall variety with very stiff straw and still the best specific weight of any two-row variety on the recommended list. Newer varieties can now however offer a potential yield benefit of up to 6%.

Specific Weight
Maturity
Untreated Yield
Heavy Soils
Light Soils
Straw Height with PGR

71 KG/HL
+1
81%
98%
97%
89 CM

Mildew
Yellow Rust
Brown Rust
Net Blotch
Rhyncho
Resistance to Lodging



NEW

KWS GIMLET

KWS

Two Row

(California x Matros) x KWS Glacier

UK Yield 104%

East 106%

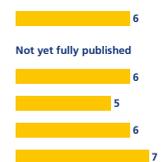
North 100%

Newly recommended and the highest yielding two-row barley variety available. This taller variety offers growers plenty of straw, however it isn't quite as stiff as **KWS Orwell** or **KWS Cassia** therefore would benefit from a good PGR programme. It does however have a slightly better spt wt and a improved level of disease resistance, particularly on Mildew and appears to give its best results on heavier soils.

Specific Weight
Maturity
Untreated Yield
Heavy Soils
Light Soils
Straw Height with PGR

68.1 KG/HL
+1
85%
105%
104%
95 CM

Mildew
Yellow Rust
Brown Rust
Net Blotch
Rhyncho
Resistance to Lodging



UK's No1 VARIETY

KWS ORWELL

KWS

Two Row

B105 x Salsa

UK Yield 103%

East 102%

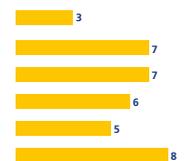
North 102%

The UK's most popular two-row variety taking a 25% market share in 2018 and will once again dominate sales in 2019. A full 5% above **KWS Cassia**, this variety is like by growers for its consistency across all regions and soil types and comes with slightly shorter but stiffer straw than its direct competitors. The variety is however susceptible to mildew.

Specific Weight
Maturity
Untreated Yield
Heavy Soils
Light Soils
Straw Height with PGR

67.8 KG/HL
0
81%
102%
102%
87 CM

Mildew
Yellow Rust
Brown Rust
Net Blotch
Rhyncho
Resistance to Lodging



NEW

LG FLYNN

Limagrain

Two Row

Captain x Tower

UK Yield 104%

East 104%

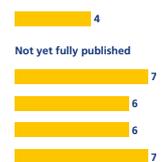
North 101%

This very promising new variety from the **Limagrain** stable offers market leading yields coupled with medium tall but stiff straw, stiffer than its direct competitors and an excellent specific weight again which is better than its nearest competitors and indeed nearly comparable to **KWS Cassia**. The variety has good resistance on Rhyncho but is weak on Mildew. Gives it's best performances on heavier soils.

Specific Weight
Maturity
Untreated Yield
Heavy Soils
Light Soils
Straw Height with PGR

69.8 KG/HL
+1
82%
106%
102%
91 CM

Mildew
Yellow Rust
Brown Rust
Net Blotch
Rhyncho
Resistance to Lodging



HYBRID'S

BAZOOKA

Syngenta

UK Yield 107%

East 108%

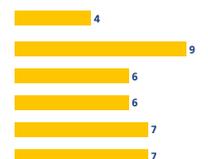
North 106%

Currently the most popular hybrid variety, this taller medium stiff variety has with the exception of mildew good level of disease resistance and a good specific weight. The joint highest yielding variety on heavy soils.

Specific Weight
Maturity
Untreated Yield
Heavy Soils
Light Soils
Straw Height with PGR

68.8 KG/HL
0
89%
109%
106%
109 CM

Mildew
Yellow Rust
Brown Rust
Net Blotch
Rhyncho
Resistance to Lodging



KINGSBARN

Syngenta

UK Yield 108%

East 109%

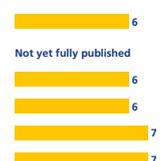
North 106%

Newly recommended, this variety has an excellent specific weight and is slightly shorter than **Bazooka** but stiffer strawed. In addition it offers a solid all round disease resistance package.

Specific Weight
Maturity
Untreated Yield
Heavy Soils
Light Soils
Straw Height with PGR

69.9 KG/HL
0
89%
108%
106%
103 CM

Mildew
Yellow Rust
Brown Rust
Net Blotch
Rhyncho
Resistance to Lodging



KWS Gimlet: new winter barley delivers impressive yields

The leading two-row winter barley on the 2018-19 AHDB Recommended List, KWS Gimlet performs strongly in both the winter barley heartlands of the north and east. Its high yields are supported by good specific weight, low screenings and strong straw.

A high-yielding feed type with a range of appealing characteristics that will make management easy and support its appeal on farm, **KWS Gimlet** is a two-row feed variety with Barley Yellow Mosaic Virus (BYMV) resistance.

One of the highest untreated yields of any recommended variety owes much to its robust all-round disease resistance, especially to Rhynchosporium and net blotch, suggest **KWS Gimlet** will find favour with growers across the east and north.

A three-way cross between **KWS Glacier** and California x Matros, **KWS Gimlet** is taller than its parents at about 97cm, while being earlier to mature than **KWS Glacier**. It is the highest-yielding variety in the east region.

Until the addition of **KWS Gimlet** to the Recommended List, **KWS Orwell** was been the benchmark variety by which **KWS** has measured its stock as it has shown excellent yield consistency across a range of seasons. **KWS Gimlet** has constantly yielded 1-2% higher than **KWS Orwell** in **KWS** trials during this time.

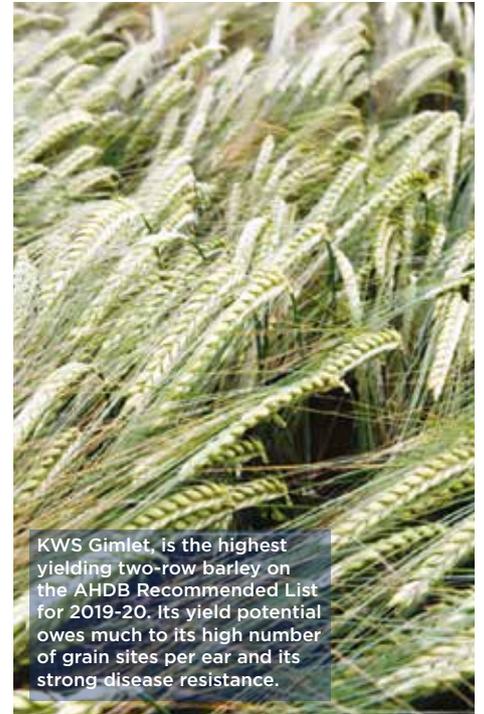
This yield progression owes much to it carrying five to six more grain sites per ear than other **KWS** two-row varieties and it also demonstrates a faster growth habit that marks it out as being distinct from other two-row types.

Its consistent performance owes much to its combination of favourable characteristics including all-round disease resistance and high grain sites per ear combined with its favourable specific weight.

KWS Gimlet is the highest-yielding two-row feed

- Highest yielding two-row barley on the AHDB Recommended List with an east region yield of 106% and a north region yield of 100% of controls

- One of the highest untreated yields on the RL at 84% of controls supports good all-round disease resistance, especially Rhynchosporium and net blotch.
- Good specific weight, low screenings.
- Strong straw strength and mid-maturity similar to **KWS Orwell**.



KWS Gimlet, is the highest yielding two-row barley on the AHDB Recommended List for 2019-20. Its yield potential owes much to its high number of grain sites per ear and its strong disease resistance.



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- > Normally followed by foliar applications of manganese in season

Did you know that many soils in the UK are manganese deficient?

Although foliar application of manganese is effective at critical stages of growth, spraying cannot take care of the early stages of deficiency when there is insufficient foliage and/or poor spraying conditions.

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Winter oil seed rape varieties

Conventional varieties

Aspire

Highest yielding variety on the recommended list for the North. **Aspire** has a short very stiff straw, is early to flower and late to mature. A LLS score of 7 puts it with the best, and a useful 6 for phoma, as well as being resistant to turnip yellow virus. **Aspire** has a high oil content at 45.8. A slower developing variety suggests it is not suitable for drilling late.

Acacia

New conventional variety from **Limagrain** currently top on the candidate list. **Acacia** is an ideal replacement for parent variety **Anastasia**, having similar disease ratings and stem stiffness with a step up in yield. **Acacia** also possesses the good vigour of **Anastasia**.

Anastasia

Top selling conventional from **Limagrain** which sells its self with consistently good performance on farm. Reasonable disease ratings with a 6 for LLS and a 5 for canker. **Anastasia** has the vigour of a hybrid which gets it away quick which we need in the north. Fairly short and very stiff. With good vigour it also allows growers to cut seed rates, which in itself can be a big saving.

Barbados

A conventional variety from **KWS** which has the best disease resistances of any of the current on the list with an 8 for LLS and an 8 stem canker. A bit taller than **Anastasia** but again very stiff. Slightly later to flower and ripen, but this is where it gets the yield, and having some of the acreage in a later ripener which helps spread the harvest workload. Performs very well in the early drilled slot.

Campus

A conventional variety which has performed well in the North for a few years. **Campus** has a stiff straw and is early to flower, with a 6 for both LLS and Phoma.

Elevation

High yielding conventional variety which does well in the North. **Elevation** has a short stiff straw and is late to flower and late to mature. LLS rating of 6 and a phoma rating of 5.

Django

Although not on the UK recommended list, conventional variety **Django** has proved popular on farm. **Django** has proved to be very vigorous in the autumn, with a stiff straw. 6 for LLS and 7 for stem canker.

Hybrid varieties

Alizze

Top selling hybrid in the north bred by **RAGT**. **Alizze** has a 7 for LLS, stiff straw and high oil content. **Alizze** is variety most suited to drilling early.

Aquila

A hybrid from **Limagrain**, on the East West list. Early to flower, and earlier to ripen than many mainstream varieties. **Aquila** has a very vigorous growth habit and has pod shatter gene. **Aquila** has a reasonable disease profile with a 6 for LLS and an 8 for stem canker.

DK Extrovert

Long term favourite with farmers due to its good performance on farm. A very vigouress type with reasonable disease profile. **Extrovert** is a tall variety which needs good pgr program.



Winter oil seed rape varieties

Hybrid varieties – continued

DK Exstar

A med-tall variety with very, very stiff straw and an unrivalled disease package with scores of 7.6 for LLS and 8.3 for Canker.

Relatively early to flower and harvest with a good oil content of 45.2, a serious contender for those Extrovert fans looking to move on.

Aurelia

A recommended list candidate variety which looks likely to be a step up for UK growers. Bred by Limagrain, Aurelia offers an outstanding package of traits,

with Turnip yellow virus resistance and the best pod shatter resistance. LLS rating of 7 and an 8 for phoma make it stand out. Aurelia is a medium height variety with stiff straw.

Clubroot resistant

SY Alibaba

Yields similar to conventional types, and has proved reliable on farm, although not on the recommended list. Good disease ratings with a 6 for LLS and an 8 for Phoma. SY Alibaba is later to flower and later to mature which may be an advantage for those wishing to spread the workload.

Crocodile

Looking good in trials, where it has given yields similar to mainstream types. Growers wishing to grow more than one club root resistant variety should grow some Crocodile. Crocodile is weaker strawed than Crome, and similar disease with a 6 for LLS and a 4 for Phoma.

Crome

Newly recommended club root resistant variety, producing yields equal to mainstream varieties, 103% in the North. Crome has a very stiff straw and high oil content. Disease ratings are better than other club root types, with a 6 for LLS and a 4 for Phoma.

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Limagrain

Why grow a Clearfield variety?

- **Clearfield** is a growing system using Hybrid oilseed rape that is tolerant to the herbicide Imazamox and **Clearfield** varieties are identified by the prefix **CL**
- Two post-emergence herbicides are available to use on **CL** varieties, **Cleranda** and **Cleravo**.
- They remove sources of Euricic acid contamination in the field.
- Crop becomes established before herbicide application.
- Rapid establishment from using **Hybrid Clearfield** seed.
- Excellent weed control by allowing post-emergence spray timings

Growing **Clearfield** varieties gives growers peace of mind that their grain will meet the Euricic acid levels when delivered to the crush and these levels are likely to be reduced from 5% to 2% in the next year.

The main source of these higher levels of Euricic acid are from oilseed rape volunteers and brassica weeds. **Clearfield** tolerant varieties allow growers to control a wide range of weeds in the autumn using the post-emergence BASF herbicides **Cleranda** or **Cleravo**. For the best results aim to target weeds at the 1-4 true leaf stage, typically 11-16 weeks after drilling.

The **Clearfield** system ensures the oilseed rape crop is established before the application of any herbicides and increases flexibility in post-emergence spray timings, allowing the grower to spread his work load at peak times.

Wide row spacing (+25cm) provides better weed control in the field allowing the **Clearfield** herbicides to give full control of broadleaved weeds, volunteers cereals, charlock, runch, hedge mustard and cranesbill which can lead to oil purity problems.

Key agronomic factors

- Ensure Dash adjuvant is used in order to improve leaf cover for Imazamox is mainly foliar uptake.
- Apply at least 100 l/ha water for good coverage, avoid leaf wash off including heavy dews.
- Avoid application of **Cleranda** after the end of September and **Cleravo** after the end of October on drained land.
- Avoid misapplication to non **Clearfield** crops
- Control of **Clearfield** volunteers in following crops requires careful planning – reduce combine losses, use stale seed bed techniques and use a non ALS herbicide in the herbicide programme.

Clearfield varieties

Phoenix

Top selling **Clearfield** variety which has performed well on farm. **Phoenix** produces seed with very high oil content, has a stiff straw and 6 for both LLS and phoma.

DK Impressario

A very high Gross output variety that comes with stiff straw, pod shatter, a good LLS score and double phoma resistance. Suitable for the main drilling window and ideal for delayed drilling due to its rapid autumn development.

DK Imperial

Just behind its sister variety **Impressario** for Gross output, otherwise the variety offers many of the same attributes i.e. excellent lodging and stiffness scores, pod shatter and double phoma resistance.



GrainCo Scotland's Balgonie trading hub

Scottish Wheat Varieties

A couple of new varieties to note for Scotland.

KWS Jackal is worth looking at doing particularly well in the North. Medium maturity with top rating for Yellow rust and very strong on mildew. Rated "medium" for distilling

Similarly, **Elation** offers similar disease profile than that of **KWS Jackal** with similar yield and good for distilling. It suits lighter soils.

Due to its poor rating for distilling due to its low spirit yield, **Barrel** will need more careful handling this year in finding its end market. This should be discussed with your **GrainCo** contact to ensure it's directed to a suitable end user.

Despite this **Barrel** is a good option for the early drilling window: – high yielding, short with stiff straw.

Zulu – Rated medium for distilling but yields well. Moderate resistance to lodging

Leeds – Later maturing but good yields and good specific weight. Suits slightly heavier land.

Viscount – an older variety but nonetheless consistent.



Simon Thomson (left) and Gavin Will at the Balgonie office

Varietal selection in line with consumer preference is becoming more critical than ever and growers need to be aware now of what may and may not be accepted by the local and Scottish market.

The **GrainCo** open day at the Balgonie site has become a perennial fixture linking together practical plot trial tours with consumer thinking and input advice with representation from the fertiliser sector also.

This year it will be on 4th July. Please look out for invites or get in touch for more detail.

Revelation – A good option for early drilling. Late maturing with stiff straw.

Scottish Barley Varieties

A few to highlight for the Scottish market.

SY Kingsbarn is a high yielding six row hybrid. It's showing great potential with decent specific weight characteristics. Good all round disease profile, including rhynco sporium. It will need robust PGR programme.

Sunningdale is the highest yielding six-row hybrid feed variety recommended for the North.

Funky is also a six-row (non-hybrid) variety. Stiff straw and good specific weight. Good rhynco sporium rating and decent all round disease resistance. Suits various soil types.

KWS Orwell is the highest yielding two row variety. Short straw with good lodging resistance. Good on brown rust but susceptible to mildew.

KWS Tower is still consistent, slightly earlier than **Orwell** in maturation with good lodging resistance.

KWS Astaire also shows good potential but is let down by low bushel weight – one for home feeding?

Oats

In short, winter oats wise, the variety picture is little changed. **Dalguise** is the preference for the Scottish

market, due to its higher beta glucan content. Beta glucan is proven to be important in reducing cholesterol and as such has become an increasingly important health claim attached to oats products in Scotland. **Gerald** and **Mascani** are still popular choices, particularly further south and have been consistent performers for the last few decades.

No new varieties have emerged to challenge these as of yet, without risking failing milling specification.

A number of growers in Scotland have been trialling growing spring oats varieties through the winter to help balance the beta glucan issue in part, as spring oats naturally contain higher levels. Early plot and farm results have been encouraging, though this research is still at an early stage.

Here are a few comments re. the main spring oats varieties.

Canyon – highest yielding spring oats over the last 10 years, through straw length does make lodging a risk

Elyann – good yielding and milling performance. Shorter and stiffer strawed than **Canyon** and slightly earlier.

Conway – preferred variety of **Quaker Oats**. Short, stiff variety akin to firch though yield slightly lower.

Aspen – a high yielding, short strawed variety. Poor beta glucan content means this is not acceptable into **Quaker**, although other millers are still accepting.



Last year's Balgonie Open day.

Trial results vindicate variety selection for Stephen Buckle



Few growers have the time to trial upwards of 15 varieties to see which perform best on their farm, but for Stephen Buckle, host farmer of the GrainCo winter wheat demonstration plots at Limebar Farm, Boroughbridge, it is a worthwhile and rewarding exercise.

With 35 varieties on the Recommended List however, the first challenge is to identify those from each market group that have delivered above-average performances in the region in official trials. As someone with a background in plant science and botany this is an appealing task and Stephen enjoys studying the details that separate varieties.

Limebar Farm is not however, your typical trial site. The closure of the sugar beet factory at York in 2007 signalled the end of a four-year rotation and the start of continuous

cereals. Except for some seasonal labour Stephen manages the 285-acre farm on his own. In the interests of maintaining a simple system that lends itself to only one operator, half of the farm is in continuous wheat while the remainder is predominantly winter barley with a small area of spring wheat to ensure the farm complies with the three-crop rule.

Across the sandy loam soils performance is good with a five-year average winter wheat yield of 9.8 t/ha (3.97 t/ac) though Stephen is quick to point out that this slightly misleading as 2015 was an exceptional year that skews the results. Without it, the five-year average is closer to a still-nonetheless-respectable, 9.5 t/ha (3.84 t/ac). The five-year winter barley yields are a little lower at 8.5 t/ha (3.44 t/ac) which many growers might consider to be a more impressive performance than

the wheat. The barley is usually spread between several varieties grown as seed for GrainCo.

Wheat drilling follows the barley and usually commences towards the end of September typically finishing three weeks later. "It's not a rapid process and doing all operations on my own means I usually manage about 15 acres a day," says Stephen. Come the spring and the wheats typically receive four fungicides and about 250 kg N/ha while the barley tends not to get a T3 and about 50kg less N/ha.

Consistent performance

For the past two years the best performing varieties in trial have come from KWS with Group 4 hard feed Kerrin and Group 1 milling wheat Zyatt being the most consistent high yielders. For this reason, Kerrin and Zyatt make up the 81 ha (200 ac) of commercial winter wheat at Limebar Farm whereas two years before the demonstration trials gave a greater insight into individual variety performance, it was Skyfall and Dickens.

While Zyatt and Kerrin deliver the goods at Limebar Farm Stephen notes that this owes much to them simply being well-suited to his farm situation.

"Both Kerrin and Zyatt perform well in the eastern region, prefer to be drilled in mid-October (when the trial plots are sown) and are good second wheats making them ideally suited to my farm conditions. Other varieties, such as Graham and Revelation,

may perform much as first wheats and drilled three to four weeks earlier. Probably the most important lesson I've learned from the trials is that not all varieties are the same, it's a case of 'horses for courses'," he says. Coincidentally, they also appeal to his desire to have a mix of bread-making and feed wheats which made them the obvious varieties to succeed **Skyfall** and **Dickens**.

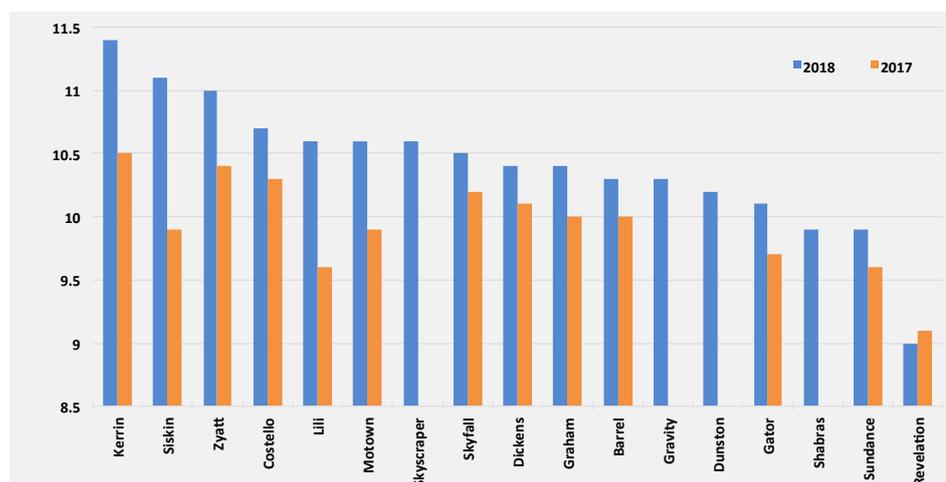
"My preference is to have a combination of Group 1 and 4 varieties partly because it spreads the risk while still receiving a premium for part of my crop, but also I have the storage to keep them separate. It

makes sense to choose those that are the highest yielding from each group and for me this means spreading the area between one-third of **Zyatt** and two-thirds of **Kerrin**," he explains.

Managing the variety plots over the past two years has also given him an insight into the characteristics that shape each variety. What looks good, doesn't always mean it will yield well, he says. "As with much of life, looks can be deceiving. For example, I look at **Kerrin** in the spring and it always looks good to me while **Zyatt** is less attractive and yet they yield similarly. It reminds me not to make judgements until I have all the facts before me," says Stephen.

It is a similar tale with winter barley. **Glacier**, he says, "was a scary variety to grow, especially on an open hill where brackling is a concern. In contrast, **Cassia** has been a consistent variety over the last six years and has good grain quality. While slightly higher yields are achievable with newer varieties, in my experience the yield gap is still quite small".

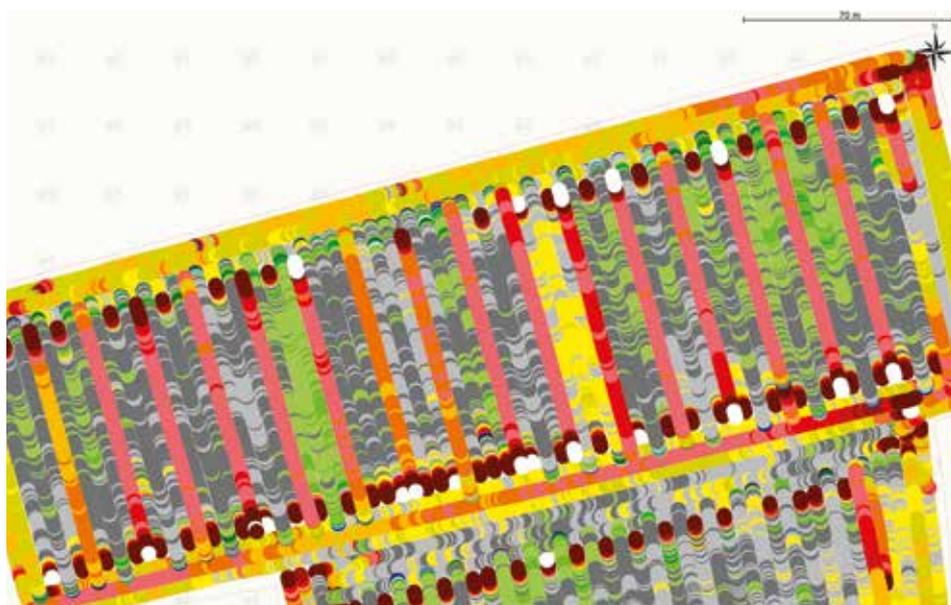
More recently he has grown Orwell for seed describing it as "another solid performer".



"It yields better than **Cassia**, but if it has a weakness it is mildew though this should not surprise anyone given its score of 3 on the **Recommended List**," he says.

Across the winter wheats in trial there is significant variation in disease resistance, so as someone who gets to see up close the difference between scores of 6.7 at the top end and 4.5 at the bottom for Septoria tritici how will the withdrawal of the popular multi-site fungicide chlorothalonil effect his variety selection?

"I remain attracted to Group 1 and 4 varieties over those in 2 and 3, so assuming the order of varieties that yield well here doesn't change then post CTL use-up I will probably grow more **Zyatt** and less **Kerrin** because the value of resistance will increase with the loss of fungicides," explains Stephen.



This year's open day is on **19th June** and varieties included in the trial include three newly recommended varieties, **KWS Extase**, **KWS Firefly** and **LG Skyscraper**, and a hybrid wheat **Hiclick**.

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Every care is taken in the preparation of this booklet, however it should only be used as a guide and GrainCo cannot accept any responsibility for any losses incurred as a consequence of this information. Data from the AHDB Recommended List except where otherwise stated: Full database available at www.ahdb.co.uk