



# AUTUMN SEED BROCHURE 2022





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# HARVEST 2022

**Local, not national - Focused here, not "over there". Committed to independence and continuing to improve for the next generation. Mortimers.**

A year of significant change and global strife which we can't control, requires a year of guaranteed local delivery from us.

Our investment in seed quality and an outstanding team speaks for itself. Equally important, as last year showed, is end-to-end control of seed production in the local area; from brilliant long-term, local growers, to our own haulage fleet and hugely experienced and committed drivers. This complete, local control of production will always be how we work, but in a tough year like last year it really showed its value, as we got everything on farm early whilst others failed.

We can't stand still, and this year we are investing in a new shed and lorry to improve delivery even further, and welcome a number of new faces to our growing team. We have also increased our planted area to give us more stock, and for the first time we have started high grade pre basic seed production for the breeders themselves. This is a real recognition of the standards and capability that we have now reached, and validates your decision to invest in quality seed when you deal with Mortimers.

On the topic of quality, all farm saved seed is cleaned to the same standards as our certified seed, with every grain passing through the colour sorter. To ensure the best quality possible.

**A view over the hedge...** 2022 sees the expansion of our hugely successful independent trials, being run at Beevers' Farm, at Cottam Warren. These remain

farm scale, honest assessments, to allow us all to scrutinise together, what works here, not "over there". We have also ripped up part of the car park and created some small scale ELMS trial plots at the office for when you pop in.

New, interesting varieties which have impressed us this year include the new highest yielding wheat on the Recommended List, Champion, which is a new Group 4 hard with an excellent disease package (and OWBM resistance). KWS Dawsum, also a Group 4 hard, is exciting for growers wanting a quality grain with excellent bushel weight. There are two new Group 1 Spring wheats available this year, included in our Autumn brochure because they can be drilled in late Autumn: Nissaba, can be drilled from the end of October and KWS Ladum from Mid November onwards. An option worth considering for some milling wheat growers. We also are exclusively selling the hybrid barley, SY Canyon, which is new on the Recommended List this year and is a real step on in terms of specific weight and grain quality in the hybrid market.

The world will continue to change and behave as unpredictably as it always has. As a team at Mortimers we remain committed to steadily and continually improving our capability, and remaining an independent, family-owned business focused on Yorkshire farmers and no one else, for the next generation.

Thank you for your ongoing support and we look forward to doing business in the coming Harvest 2022 season, and hope to see you in person at the office as we used to before covid. Welcome back.

**From all at Mortimers.**

# ABOUT US

Mortimers are independent grain, seed and fertiliser merchants in Driffield, East Yorkshire who produce the highest quality seed at their new production facility. The state of the art plant, built in 2014, has been further enhanced in 2021, with the installation of a new large treater, a precleaner and an optical (colour) sorter. This ensures the best possible cleaning and accurate chemical application of all cereals and pulses and Mortimers offer a service for both certified and farm saved seed.

## FARM SAVED SEED

Included in the farm saved seed service is an option to haul your tonnage to and from our plant. Alternatively, we can arrange for your grain to be collected and brought back to farm. We can also test seed for germination and TGW. If a Glyphosate type product has been used, a full grow-on test would be required. Collection of any BSPB royalty is typically undertaken by us and paid over on your behalf. Alternatively, you are free to pay royalty on a hectare basis. Full guidance is available on request.

We have our own on site weighbridge: farm saved seed will be weighed in and screenings will be credited with their feed value at the time. Our emphasis is on quality when cleaning and treating your farm saved seed. Our Cimbria seed cleaning equipment and optical sorter ensures the seed is cleaned to the highest standard, and accurate chemical application through the Bayer Evolution seed treatment applicator, results in the best possible start to your crop.

## CERTIFIED SEED

Certified Seed wherever possible will be selected from one of our own local quality growers. Our staff regularly inspect the growing crops to ensure they are grown to the highest standard and in the best possible conditions. Once harvested, we undertake full germination, purity and screening tests on all lots. During intake, the seed is checked again before it is allowed to tip.

Once cleaned, a representative sample is taken to an Official Seed Testing Station for a germination and purity test. We are always competitive on price and service. While it is impossible to stock every variety, we will be very pleased to offer impartial advice on varietal selection and chemical applications.

## MORTIMERS COMMERCIAL CLEANING

During 2022, our plant and colour sorter has been busy undertaking commercial cleaning of crops. We can clean ergot out of milling wheat, barley out of milling wheat, fusarium out of malting barley and the general cleaning up of wheat.

### The Optical (Colour) Sorter



If in future you need to clean up an otherwise valuable crop please get in touch.

## JAMES MORTIMER LTD CROP TRIALS 2022

Mortimer's have our own independent crop trials, very kindly hosted on one of our customers farms, close to Driffield on the Yorkshire Wolds. We have drilled a wide range of winter barley and wheat varieties, both new and existing. The trials are on a farm scale, to give our customers a realistic

view for future selection. Please let your farm representative know if you would like to look around the trials at any point.

In June, Mortimers are holding a trials day, please let your farm representative know if you would like to attend.



Some of the varieties at the trials include:

### BARLEY'S:

**Malting:** Craft, SY Vessel

**2-Row Feed:** KWS Tardis, Valerie, KWS Hawking, KWS Orwell, KWS Cassia, LG Dazzle, LG Caiman, KWS Ferris

**Hybrid:** SY Kingsbarn, Bazooka, SY Canyon

### WHEATS:

**Group 1:** Skyfall, Crusoe, KWS Zyatt

**Group 2:** KWS Extase, KWS Siskin, KWS Palladium

**Group 3 Soft:** KWS Firefly, LG Astronomer, LG Illuminate

**Group 4 Soft:** LG Skyscraper, RGT Saki, LG Spotlight, RGT Bairstow

**Group 4 Hard:** KWS Dawsum, Champion, KWS Cranium, Gleam, Graham, Costello, Theodore, LG Typhoon



## THE FORGOTTEN WHEAT DISEASES

### Why do we use seed treatments?



#### **BUNT**

Higher risk in farm saved seed repeatedly sown without a SPD



#### **SEPTORIA SEEDLING BLIGHT**

Reduces plant establishment



#### **ERGOT**

Risk to health and grain rejections



#### **LOOSE SMUT**

Higher risk sowing untreated seed



#### **MICRODOCHMIUM NIVALE**

Causes significant reduction in crop establishment

## THE FORGOTTEN BARLEY DISEASES

### Why do we use seed treatments?



#### **LOOSE SMUT**

Higher risk from growing repeatedly farm saved, untreated seed



#### **ERGOT**

Risk to health and grain rejections



#### **COVERED SMUT**

Higher risk from growing repeatedly farm saved, untreated seed



#### **LEAF STRIPE**

Can build up rapidly in repeatedly home-saved seed



#### **MICRODOCHMIUM NIVALE**

Causes significant reduction in crop establishment

## OUR TOP TIPS FOR WINTER BARLEY VARIETY SELECTION THIS AUTUMN....

### TOP MALTING BARLEY CHOICE...

#### **Craft**

*Reliable on farm performance and demand from end-users.*

### CONSISTENT PERFORMERS...

**KWS Orwell**  
**KWS Hawking**  
**Valerie**  
**KWS Cassia**

### WHICH HYBRID VARIETY IS THE BEST CHOICE FOR BLACKGRASS COMPETITION?

**Bazooka**

### BEST HYBRID PERFORMER ON HEAVY LAND...

**SY Thunderbolt**

### TOP YIELDERS

**KWS Tardis**

### MARKET LEADERS FROM AUTUMN 2021

**SY Kingsbarn**  
**KWS Orwell**  
**KWS Hawking**

### OUR PICK OF THE HYBRIDS FOR AUTUMN 2022

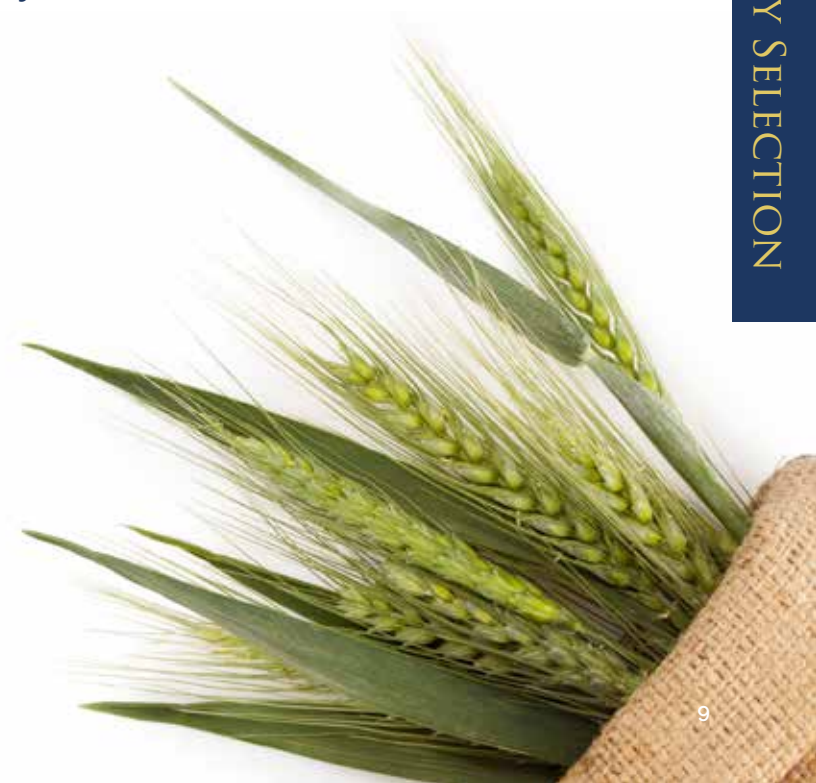
**SY Canyon**

### THE FARMERS FRIEND'S OF THE WINTER BARLEY VARIETIES...

**Valerie**  
**KWS Cassia**  
*Bold grain*  
*Good straw quality.*

### EXCITING OPPORTUNITY FOR MALTING BARLEY GROWERS!

**SY Vessel**  
*The first dual purpose Non-GN winter malting barley with strong interest from maltsters.*



# WINTER BARLEY

## AHDB RECOMMENDED LISTS

### Winter barley 2022/23

Market options, yield and grain quality



End-use group

Scope of recommendation

Variety status

#### Fungicide-treated grain yield (% treated control)

United Kingdom (9.8 t/ha)	96	95	105	104	104	103	103	102
East region (9.6 t/ha)	96	95	106	105	104	105	104	103

#### Untreated grain yield (% treated control)

United Kingdom (9.8 t/ha)	78	78	85	84	88	81	87	82
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#### Main market options

MBC malting approval for brewing use	F	F	-	-	-	-	-	-
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#### Grain quality

Specific weight (kg/hl)	70.0	70.1	70.2	69.5	68.6	70.7	68.9	70.5
Screenings (% through 2.25 mm)	2.0	2.0	1.4	1.3	1.9	0.9	1.8	1.9
Screenings (% through 2.5 mm)	5.9	6.2	4.3	4.2	5.6	2.7	5.4	6.0
Nitrogen content (%)	1.73	1.67	-	-	-	-	-	-

#### Agronomic features

Resistance to lodging without PGR (1–9) - <a href="#">see note below</a>	7	7	8	7	[6]	7	[7]	6
Resistance to lodging with PGR(1–9) - <a href="#">see note below</a>	7	8	8	8	6	8	7	6
Straw height without PGR (cm)	97	97	95	95	[92]	94	[92]	92
Straw height with PGR (cm)	90	88	86	83	88	85	85	83
Ripening (+/-KWS Orwell, -ve = earlier)	-1	0	0	0	0	0	0	-1

#### Disease resistance

Mildew (1–9)	6	6	5	6	7	6	6	5
Brown rust (1–9)	7	7	6	6	8	6	8	7
Rhynchosporium (1–9)	6	6	7	5	6	4	7	6
Net blotch (1–9)	5	6	[5]	[5]	[5]	[5]	[4]	5
BaYMV	R	R	R	R	R	R	R	R

#### Breeder/UK contact

Breeder	SyP	SyP	KWS	Ack	Ack	NS	Lim	LimEur
UK contact	Syn	Syn	KWS	ElsAck	ElsAck	Sen	Lim	Lim

#### Soil type (about 50% of trials are medium soils)

Light soils (9.5 t/ha)	95	96	103	104	102	103	102	102
Heavy soils (9.5 t/ha)	97	93	109	105	102	104	105	103

#### Agronomic characteristics

Lodging without PGR (%)	6	3	2	4	[12]	3	[5]	8
Lodging with PGR (%)	5	2	1	1	10	1	5	6
Brackling (%)	12	11	7	10	11	10	8	27

#### Status in RL system

Year first listed	18	16	21	21	22	21	22	19
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KWS Hawking	KWS Orwell	Valerie	KWS Cassia	Sy Thunderbolt #	Sy Kingsbarn #	Sy Canyon #	Bazoka #	KWS Feerlis	Average LSD (5%)
				Six-row feed					
UK	UK	UK	UK	UK	UK	UK	UK	Sp	
						NEW	C	NEW	
101	100	99	97	107	106	106	104	103	2.7
102	100	100	97	106	106	105	104	103	3.2
81	80	82	81	87	84	89	84	84	5.0
-	-	-	-	-	-	-	-	-	
69.4	68.8	70.9	72.1	70.5	70.4	71.2	70.0	69.5	0.8
1.8	1.6	0.4	1.2	1.8	1.4	1.8	2.2	0.7	0.7
5.6	4.9	1.0	3.5	7.2	5.7	6.4	7.7	3.7	1.8
-	-	-	-	-	-	-	-	1.75	0.20
7	7	7	7	5	6	[7]	6	[8]	1.4
8	8	8	7	5	7	5	6	7	1.0
94	93	94	96	114	112	[118]	117	[102]	3.9
85	85	86	89	104	103	106	107	95	2.7
1	0	-1	1	-1	0	-1	0	0	1.1
5	3	6	5	8	7	8	5	4	1.2
6	7	5	7	6	5	6	5	5	1.0
6	6	6	5	6	5	6	6	6	1.4
6	5	[6]	5	[6]	5	[5]	5	[6]	1.2
R	R	R	R	R	R	R	R	R	-
KWS	KWS	Bre	KWS	SyP	SyP	SyP	SyP	KWS	
KWS	KWS	Sen	KWS	Syn	Syn	Syn	Syn	KWS	
99	99	99	97	103	105	105	104	101	3.6
104	100	[99]	98	107	104	105	104	104	5.9
3	3	3	5	20	12	[6]	8	[1]	-
1	2	2	4	16	5	15	6	4	-
6	9	6	10	17	15	11	12	9	-
20	16	19	10	21	19	22	16	22	



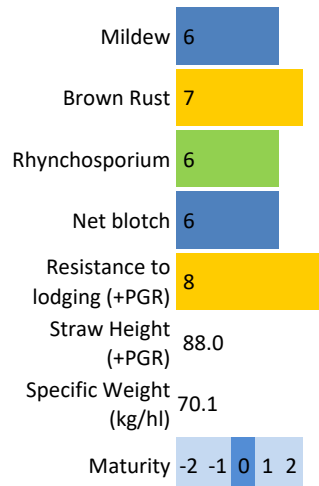
## WINTER BARLEY – MALTING

### CRAFT (SY 208-56 X SY VENTURE)

Craft remains the most popular winter malting variety with strong demand from the maltsters.

Good grain quality and overall disease package.

Many growers achieve very good yields with Craft despite its official yield figures reading lower than many other 2-row varieties.



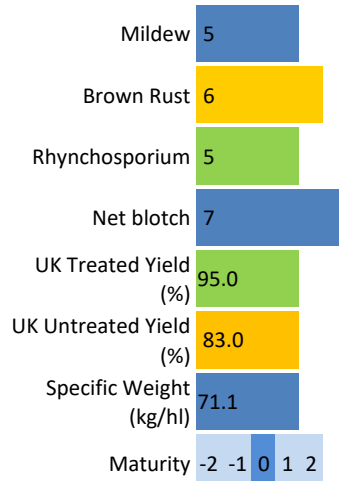
REGION	YIELD
UK	95
EAST	95
WEST	94
NORTH	96
Untreated yield	78
Light soils	96
Heavy soils	93

### SY VESSEL

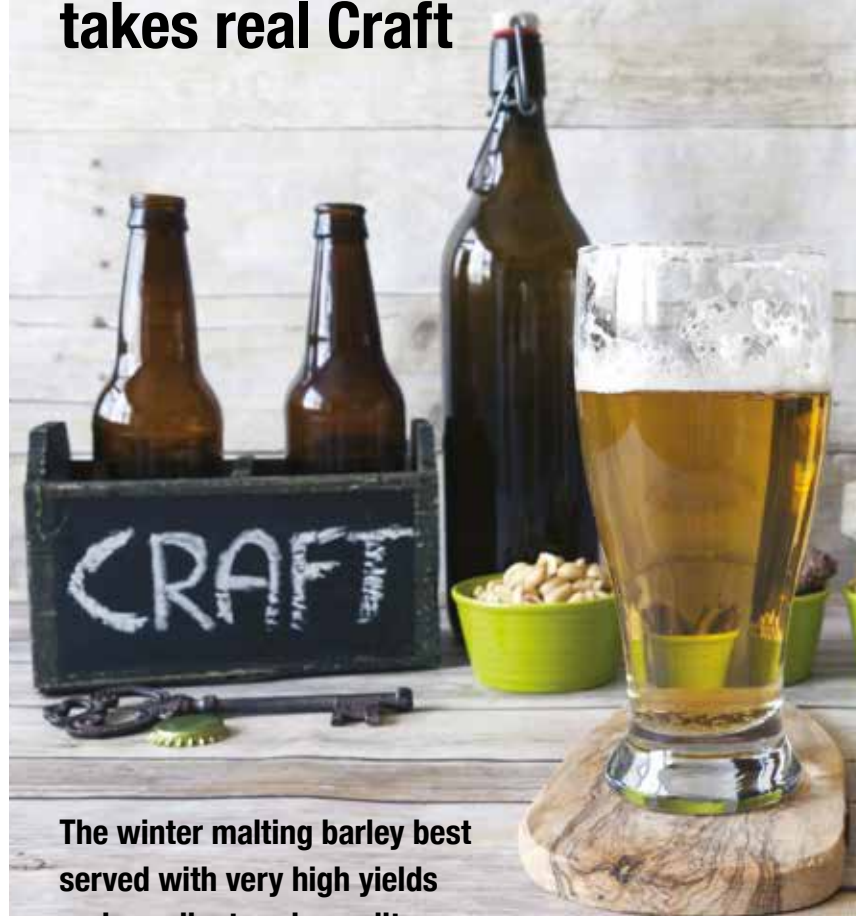
SY Vessel is a specialist winter malting barley which has strong demand from local maltsters due to its ability to both brew and distill.

SY Vessel attracts a larger premium than other winter malting barley varieties.

For more information on SY Vessel please give us a ring.



## Brewing fine quality ale takes real Craft



The winter malting barley best served with very high yields and excellent grain quality



syngenta®

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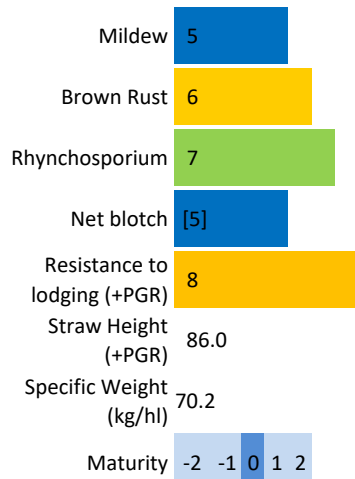
## WINTER BARLEY FEED – 2 ROW CONVENTIONAL

### KWS TARDIS - (11-12 X KWS ORWELL)

New to the market last autumn, KWS Tardis is the highest yielding 2-row variety on the market.

Excellent grain quality, stiff strawed and good agronomics - KWS Tardis is a step on for the traditional KWS Cassia and KWS Orwell growers.

Last year, our seed crop of KWS Tardis was the best barley sample we had through the lab with a bushel weight of 71.2.



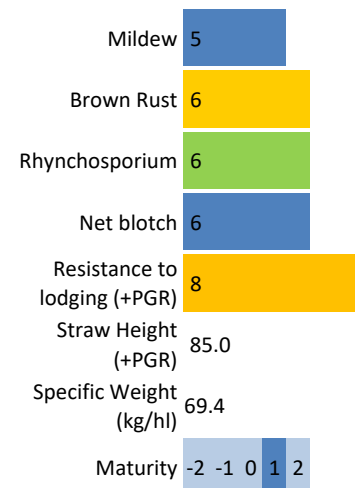
REGION	YIELD
UK	105
EAST	106
WEST	104
NORTH	104
Untreated yield	85
Light soils	103
Heavy soils	109

### KWS HAWKING ( (11-12 X CALIFORNIA) X KWS TOWER)

A high yielding feed barley which was the successor to KWS Orwell.

Good disease package and performs well on One of best varieties for brackling resistance.

KWS Hawking had 10% of the UK market share in autumn 2021.



REGION	YIELD
UK	101
EAST	102
WEST	101
NORTH	99
Untreated yield	81
Light soils	99
Heavy soils	104

# The 2-row that yields like a 6-row!

# TARDIS

## KWS TARDIS

- Exceptional yield across the UK combined with very high specific weight
- Outstanding yields in the east and on heavy land
- Super stiff straw – the only winter barley on the 2022/23 RL with twin 8s for standing



[www.kws-uk.com](http://www.kws-uk.com)

SEEDING  
THE FUTURE  
SINCE 1856



The **low risk, high yielding** feed barley for the East and West

## KWS HAWKING

- High-yielding 2-row feed barley performing well in the AHDB East and West
- Stiff strawed
- Early to mature with good grain quality



[www.kws-uk.com](http://www.kws-uk.com)

SEEDING  
THE FUTURE  
SINCE 1856



## WINTER BARLEY FEED – 2 ROW CONVENTIONAL

### KWS CASSIA ( (EDEN X CARAT) X SAFFRON )

Despite 12 years on the market, KWS Cassia still has the highest specific weight on the 2022/23 RL.

Consistent yields, bold grain and low screenings keep KWS Cassia a very popular variety on farm.

Good quality straw and solid disease package.

		REGION	YIELD
Mildew	5	UK	97
Brown Rust	7	EAST	97
Rhynchosporium	5	WEST	98
Net blotch	5	NORTH	96
Resistance to lodging (+PGR)	7	Untreated yield	81
Straw Height (+PGR)	89.0	Light soils	97
Specific Weight (kg/hl)	72.1	Heavy soils	98
Maturity	-2 -1 0 1 2		





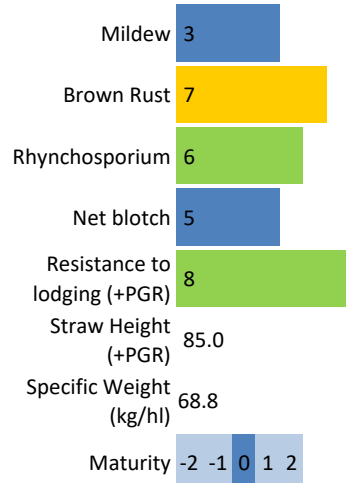
## WINTER BARLEY FEED – 2 ROW CONVENTIONAL

### KWS ORWELL (KWS TOWER X KWS SALSA)

KWS Orwell has been the most popular feed barley variety over the last few years and had 13% of the UK market in autumn 2021.

Its consistent performance has gained KWS Orwell a loyal following but we are expecting KWS Tardis to take some of its market share this autumn.

Good grain quality and good standing ability in the field but it does need watching for mildew.



REGION	YIELD
UK	100
EAST	100
WEST	101
NORTH	99
Untreated yield	80
Light soils	99
Heavy soils	100

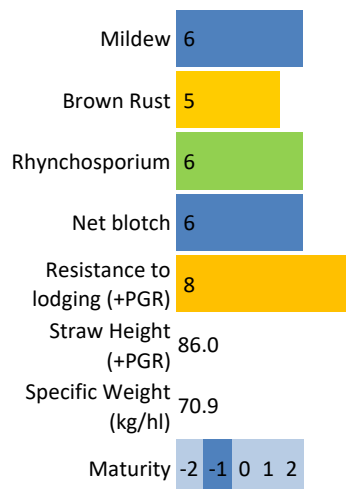
### VALERIE - 2 ROW (207-589 X SANDRA)

Valerie is known for its big bold grain and low screenings - a natural successor to KWS Cassia due to its higher yield.

Excellent lodging and brackling resistance with stiff straw.

One of the earliest feed barley's to mature. A good overall disease package - needs watching for Brown Rust.

An all round good farmers barley, ideal for those feeding their own grain on farm.



REGION	YIELD
UK	99
EAST	100
WEST	99
NORTH	99
Untreated yield	82
Light soils	99
Heavy soils	99

**Valerie**  
WINTER BARLEY

THE  
**STRONG  
PERFORMER**

AHDB  
RECOMMENDED

With superb grain quality, low screenings, high yields, early ripening and stiff straw, **Valerie** has all of the desired attributes and is a real competitor in the market.

**senova**

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[www.senova.uk.com](http://www.senova.uk.com)

## WINTER BARLEY – HYBRID

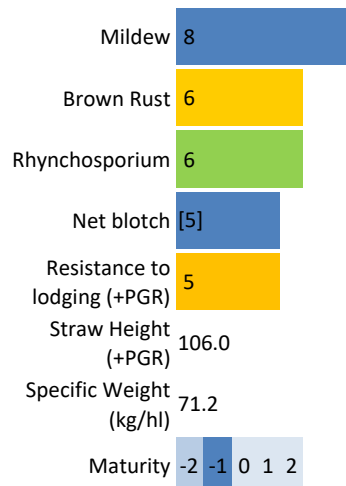
### SY CANYON - HYBRID

SY Canyon is a new hybrid to the market for autumn 2022 which Mortimers have exclusive access to.

It is very high yielding with the best grain quality of all the hybrid varieties with a specific weight of 71.2.

SY Canyon has the highest untreated yield of all the hybrids of 89%.

It is one of the earlier maturing hybrid varieties - well worth a try this autumn if you are a hybrid barley grower!



REGION	YIELD
UK	106
EAST	105
WEST	[108]
NORTH	105
Untreated yield	89
Light soils	105
Heavy soils	105

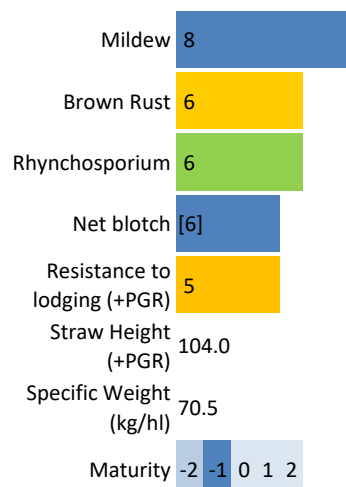
### SY THUNDERBOLT - HYBRID

New to the market in autumn 2021, SY Thunderbolt is the highest yielding hybrid barley variety.


Performs particularly well on heavier land.

Good disease ratings with a 6 for both Brown Rust and Rhynchosporium.

Early to mature to provide flexibility at harvest.



REGION	YIELD
UK	107
EAST	106
WEST	108
NORTH	106
Untreated yield	87
Light soils	103
Heavy soils	107

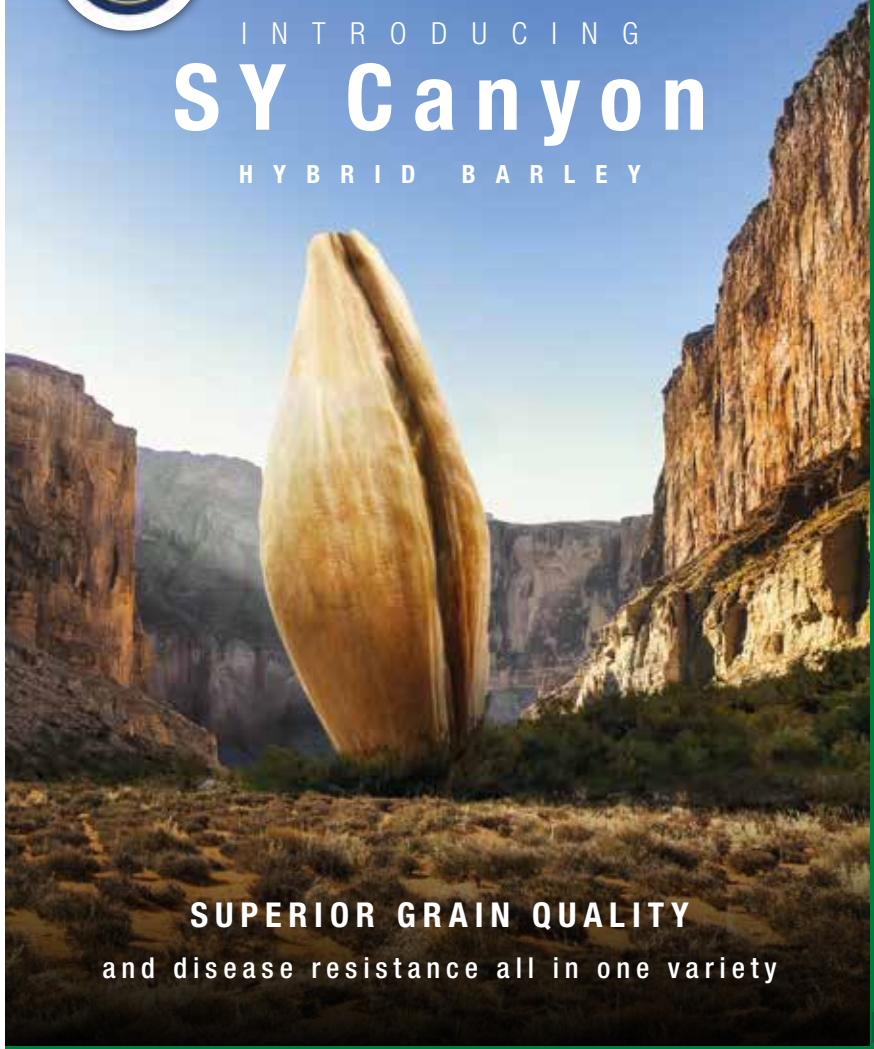


INTRODUCING

# SY Canyon


HYBRID BARLEY


BARLEY





**SUPERIOR GRAIN QUALITY**

and disease resistance all in one variety





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## WINTER BARLEY – HYBRID

### SY KINGSBARN - HYBRID

SY Kingsbarn is the leading hybrid barley variety with 13% UK market share of the total barley market in autumn 2021.

A good all-rounder that performs well on all soil types.

High yields, good grain quality and disease package.

Competitive growth habit good for grassweed suppression.

Mildew	7
Brown Rust	5
Rhynchosporium	5
Net blotch	5
Resistance to lodging (+PGR)	7
Straw Height (+PGR)	103.0
Specific Weight (kg/hl)	70.4
Maturity	-2 -1 0 1 2

REGION	YIELD
UK	106
EAST	106
WEST	107
NORTH	106
Untreated yield	84
Light soils	105
Heavy soils	104



### BAZOOKA - HYBRID

Bazooka is one of the older hybrid barley's on the market but still performs very well on farm.

The best hybrid for grassweed suppression.

It has reasonably stiff straw but requires a careful PGR program to manage its height.

Mildew	5
Brown Rust	5
Rhynchosporium	6
Net blotch	5
Resistance to lodging (+PGR)	6
Straw Height (+PGR)	107.0
Specific Weight (kg/hl)	70
Maturity	-2 -1 0 1 2

REGION	YIELD
UK	104
EAST	104
WEST	104
NORTH	104
Untreated yield	84
Light soils	104
Heavy soils	104



## OUR TOP TIPS FOR WINTER WHEAT VARIETY SELECTION THIS AUTUMN....

### CHOOSING VARIETIES TO SPREAD HARVEST WORKLOAD

*Early to harvest:*

**KWS Parkin**  
**KWS Extase**  
**KWS Palladium**  
**Graham**

*Later to harvest:*

**RGT Saki**  
**Costello**  
**KWS Cranium**

### WHICH VARIETIES CAN I DRILL FROM EARLY SEPTEMBER?

**Graham**  
**KWS Parkin**  
**KWS Dawsum**  
**Gleam**

### WHICH NEW VARIETIES SHOULD I TRY THIS AUTUMN?

#### **Champion**

*Highest yielding wheat on the market with an excellent disease package and vigorous growth habit – a great barn filler!*

#### **KWS Dawsum**

*The second highest yielding wheat on the RL, suited to early drilling and excellent grain quality.*

### GOOD 2ND WHEAT OPTIONS:

**LG Skyscraper**  
**Gleam**  
**KWS Cranium**  
**KWS Palladium**  
**RGT Gravity**

### WHICH VARIETIES GIVE ME THE MOST FLEXIBILITY FOR LATE DRILLING?

**Skyfall**  
**LG Astronomer**  
**LG Illuminate**  
**LG Spotlight**  
**KWS Cranium**  
**Gleam**  
**RGT Gravity**  
**Champion**

### TOP PICKS FOR FEED VARIETIES WITH EXCELLENT GRAIN QUALITY

**Costello**  
**LG Spotlight**  
**LG Astronomer**  
**KWS Dawsum**

### WHICH VARIETIES OFFER ME THE BEST GENETIC DISEASE RESISTANCE?

**KWS Extase**  
**KWS Palladium**  
**Champion**  
**Graham**

### TOP YIELDERS:

**Champion**  
**KWS Dawsum**  
**LG Skyscraper**  
**RGT Saki**  
**Gleam**

# WINTER WHEAT



## Winter wheat 2022/23

Market options, yield and grain quality



End-use group	UKFM Group 1			UKFM Group 2			UKFM Group 3		
<b>Fungicide-treated grain yield (% treated control)</b>									
United Kingdom (10.8 t/ha)	98	97	96	101	100	97	102	101	100
East region (10.7 t/ha)	98	97	96	100	99	98	102	102	101
<b>Grain quality</b>									
Endosperm texture	Hard	Hard	Hard	Hard	Hard	Hard	Soft	Soft	Soft
Protein content (%)	12.2	12.2	12.7	11.9	11.8	11.9	11.3	11.1	11.5
Protein content (%) - Milling spec	13.1	13.2	13.5	12.7	[13.1]	[12.9]	[12.0]	11.9	[12.3]
Hagberg Falling Number	260	273	274	289	315	294	255	253	268
Specific weight (kg/hl)	77.5	78.3	77.8	78.5	76.9	78.5	78.1	74.0	77.3
Chopin Alveograph W	[175]	[251]	230	190	[179]	198	[56]	[71]	[74]
Chopin Alveograph PL	[0.7]	[0.9]	0.6	0.6	[0.6]	0.7	[0.3]	[0.2]	[0.3]
<b>Agonomic features</b>									
Resistance to lodging without PGR (1-9) - see note below	8	8	8	7	7	6	7	7	7
Resistance to lodging with PGR (1-9) - see note below	8	8	7	8	8	7	7	8	7
Height without PGR (cm)	85	84	82	90	84	89	90	83	92
Ripening days +/- Skyfall, -ve = earlier	0	+0	+1	-1	-1	-	+3	+2	+2
Resistance to sprouting (1-9)	5	5	6	[7]	-	-	-	[6]	-
<b>Disease resistance</b>									
Mildew (1-9)	7	6	7	7	8	8	5	4	7
Yellow rust (1-9)	4	3	9	8	9	9	9	8	9
Brown rust (1-9)	6	8	3	7	5	6	3	7	5
Septoria tritici (1-9)	6.1	5.3	6.2	7.8	7.4	8.4	4.7	6.4	5.4
Septoria tritici (1-9) - one-year rating	5.8	5.1	5.9	7.3	7.2	8.2	5.0	5.8	5.6
Eyespot (1-9)	6@	7@	5	3	[6]	[6]@	[4]	5	[6]
Fusarium ear blight (1-9)	6	7	7	6	6	6	7	6	6
Orange wheat blossom midge	-	R	-	-	-	-	R	R	-
<b>Breeder/UK contact</b>									
Breeder	KWS	RAGT	Lim	Mom	KWS	EisW	KWS	LimEur	KWS
UK contact	KWS	RAGT	Lim	KWS	KWS	Eis	KWS	Lim	KWS
<b>Rotational position</b>									
First cereal (11.1 t/ha)	98	96	96	101	100	97	[103]	100	100
Second and more (9.6 t/ha)	99	98	94	101	100	99	101	103	101
<b>Sowing date (most trials were sown in October)</b>									
Early sown (before 25 Sept) (11.3 t/ha)	[100]	96	96	[97]	-	-	[103]	102	[101]
Late sown (after 1 Nov) (9.2 t/ha)	98	97	95	102	[99]	[95]	[101]	101	[101]
<b>Soil type (about 50% of trials are on medium soils)</b>									
Light soils (10.9 t/ha)	97	97	94	102	[98]	[97]	[101]	102	[100]
Heavy soils (10.9 t/ha)	99	97	97	100	98	97	102	101	99
<b>Agonomic features</b>									
Lodging % without PGR	2	1	2	4	4	8	3	5	3
Lodging % with PGR	1	3	3	2	2	6	4	3	5
Latest safe-sowing date =	End Jan	End Feb	End Jan	End Jan	[Mid Feb]	[Mid Feb]	[Mid Feb]	[End Jan]	[End Feb]
<b>Speed of development to growth stage 31 (days +/- average)</b>									
Early sown (Sept)	-2	-2	-1	-4	[-2]	[-4]	[+2]	[-2]	[+2]
Med sown (Oct)	-4	-4	-2	-7	-	-	-	[-1]	-
Late sown (Nov)	-2	-2	+0	-4	-	-	[0]	[+1]	-
<b>Status in RL system</b>									
Year first listed	17	14	12	19	22	22	22	21	22

RGT Raahid	LG Illuminate	LG Astronomer	RGT Barrow	LG Skyscraper	RGT Sakl	RGT Stokes	LG Spotlight	Champion	KWS Dawson	Gleam	KWS Cranium	Graham	RGT Gravity	Costello	Average LSD (5%)
Soft Group 4								Hard Group 4							
100	100	100	103	103	103	102	102	106	104	103	102	102	101	100	2.3
102	100	100	103	103	103	101	101	107	103	103	102	100	102	99	2.6
Soft	Soft	Soft	Soft	Soft	Soft	Soft	Soft	Hard	Hard	Hard	Hard	Hard	Hard	Hard	0.2
11.1	11.8	11.7	11.2	11.3	11.4	11.3	11.3	11.4	11.2	11.2	11.2	11.3	11.3	11.8	0.2
[11.8]	12.7	12.6	[12.2]	12.2	12.2	[12.5]	12.1	[12.4]	[12.1]	12.0	12.0	11.9	12.0	12.7	0.5
226	249	232	228	214	220	248	286	239	304	220	279	275	193	322	25.6
76.4	76.2	77.4	75.9	76.5	75.6	75.3	77.7	74.8	79.4	76.3	75.1	76.9	75.6	80.6	0.6
[72]	82	[132]	[50]	-	-	[61]	-	-	-	-	-	-	-	-	25.1
[0.3]	0.3	[0.4]	[0.3]	-	-	[0.3]	-	-	-	-	-	-	-	-	0.2
8	7	7	6	6	6	5	7	6	7	7	8	7	6	8	1.1
86	7	9	6	6	7	7	8	7	7	7	8	8	7	8	1.0
86	83	88	91	92	88	91	93	88	84	87	89	88	89	83	1.7
+3	+1	+1	+2	+0	+3	+2	+1	+0	+1	-0	+3	-1	+1	+2	0.7
-	[7]	[7]	-	[5]	[6]	-	[7]	-	-	5	[6]	7	5	6	1.3
4	5	4	6	7	5	5	6	7	8	6	6	7	5	8	1.3
8	7	8	7	7	8	7	5	8	9	5	8	7	6	9	0.6
6	7	8	6	5	7	5	6	5	7	6	4	5	6	5	1.0
6.9	6.1	6.8	6.4	4.9	5.9	6.9	5.1	7.7	6.3	5.8	5.9	6.7	4.7	5.8	1.3
6.4	5.4	6.2	6.0	4.6	5.1	6.2	4.9	8.0	6.1	5.5	5.7	6.4	4.6	5.6	1.2
[4]	5	5	[4]	4	4	[4]	5	[4]	[5]	4	5	3	4	4	2.9
7	5	6	6	6	6	6	6	6	6	6	6	7	6	6	0.4
R	R	R	R	R	R	-	R	R	-	R	R	-	R	-	
RAGT	LimEur	LimEur	RAGT	LimEur	RAGT	RAGT	LimEur	DSV	KWS	SyP	KWS	SyP	R2n	KWS	
RAGT	Lim	Lim	RAGT	Lim	RAGT	RAGT	Lim	DSV	KWS	Syn	KWS	Syn	RAGT	Sen	
100	100	99	103	103	103	103	102	105	105	103	102	102	101	100	2.3
100	100	100	104	104	103	103	101	107	104	103	102	101	103	99	3.6
-	104	[103]	-	103	104	-	101	[106]	[108]	103	[102]	100	100	99	5.4
[103]	98	100	[104]	103	104	[100]	102	[106]	[104]	103	104	100	103	102	3.7
[99]	101	100	[104]	103	102	[104]	101	[105]	[105]	103	103	102	102	99	3.5
100	100	101	104	103	102	102	102	106	104	103	100	101	101	99	3.0
2	4	3	12	9	9	30	4	11	5	5	2	7	8	3	
2	5	1	10	13	4	8	2	8	3	5	3	2	8	2	
Mid Feb]	[Mid Feb]	[Mid Feb]	[Mid Feb]	End Jan	End Jan	[End Jan]	End Feb	[Mid Feb]	[End Jan]	Mid Feb	[Mid Feb]	End Jan	End Jan	End Jan	
[+2]	[-2]	[-8]	[+3]	-4	+7	[+2]	-2	[-2]	[0]	+6	[-3]	+1	+4	-2	8.0
-	[-3]	[0]	-	-1	[-2]	-	-3	-	-	+3	[-3]	+0	+2	-2	9.3
-	[-2]	[+1]	-	-3	+0	-	-1	[-5]	[+3]	+2	[-4]	-3	-1	-2	5.3
22	21	21	22	19	20	22	19	22	22	18	21	16	18	15	

## WINTER WHEAT GROUP 1

## SKYFALL (C4148 X HURRICANE)

Skyfall has been the most popular milling wheat on farm since 2014, and is likely to remain the Group 1 of choice this Autumn.

Very wide drilling window as it can be drilled from end September through to the 7th of March.

Reasonable 2nd wheat performance.

Needs watching for yellow rust and can be susceptible to sprouting so should be given priority at harvest.

		REGION	YIELD
Mildew	6	UK	97
Yellow Rust	3	EAST	97
Brown Rust	8	WEST	96
Eyespot	7@	NORTH	96
Septoria Tritici (1-year rating)	5.1	Untreated yield	70
Septoria Tritici (3-year average)	5.3	Light soils	97
Resistance to lodging (+PGR)	8	Heavy soils	97
Resistance to lodging (- PGR)	8	First Cereal	96
OWBM	Yes	Second Cereal	98
Specific Weight	78.3		
Maturity	-2 -1 0 1 2 3		

## CRUSOE (CORDIALE X GULLIVER)

Crusoe was first introduced in 2012, and is still very popular with milling wheat growers due its consistent grain quality and ability to meet milling specifications.

Suits the main drilling window of mid september onwards through to the end of January.

A solid disease package except for its weakness to Brown Rust which needs watching.

		REGION	YIELD
Mildew	7	UK	96
Yellow Rust	9	EAST	96
Brown Rust	3	WEST	97
Eyespot	5	NORTH	94
Septoria Tritici (1-year rating)	5.9	Untreated yield	72
Septoria Tritici (3-year average)	6.2	Light soils	94
Resistance to lodging (+PGR)	8	Heavy soils	97
Resistance to lodging (- PGR)	7	First Cereal	96
OWBM	No	Second Cereal	94
Specific Weight	77.8		
Maturity	-2 -1 0 1 2 3		

## NISSABA

Nissaba is a NEW Group 1 spring wheat on the AHDB RL for 2022/23.

Nissaba has no vernalisation requirement and can be sown in the Spring. When sown in the Autumn from October onwards it remains Winter dormant until the Spring Equinox.

Nissaba is yield competitive against Winter Group 1 varieties from October drilling over 3 years of breeder assessment trialing.

		REGION	YIELD
Mildew	5	UK Yield as % control (Autumn Sowing)	97
Yellow Rust	5	UK Yield as % control (Spring Sowing)	95
Brown Rust	9		
Septoria Tritici	6		
Straw Height without PGR	77		
OWBM	Yes		
Specific Weight	76.4		
Maturity	-2 -1 0 1 2 3		

With some G1 winter wheats starting to have disease issues, Nissaba is worth trying for milling wheat growers this autumn.





# NISSABA

GODDESS *of* GRAIN

## A WHEAT FOR ALL SEASONS

Recommended by AHDB as a Spring Wheat (AHDB 22-23). Nissaba has no vernalisation requirement and can be sown in the Spring like any other Spring Wheat. When sown in the Autumn, anytime from October onwards it remains Winter dormant until the Spring Equinox.

- Competitive to winter Group 1's from October onwards planting
- Wide drilling window - October to April
- UKFM Group 1
- OWBM resistant
- Not prone to Yellow Rust races attacking current Winter UKFM Group 1 (Zyatt & Skyfall)
- High protein content enhancing opportunity of full Group 1 specification
- Excellent baking performance at a wide range of protein contents
- High seedling vigour and rapid emergence



BLACKMAN  
AGRICULTURE

It's a Group 1, but  
**not as we know it!**

## KWS LADUM

- Taking top-quality spring breadmaking yields to the next level
- UK yield 8% ahead of Mulika
- Excellent disease package including a 7 for *Septoria*



[www.kws-uk.com](http://www.kws-uk.com)

SEEDING  
THE FUTURE  
SINCE 1856



## WINTER WHEAT GROUP 1

## KWS LADUM (KWS SYWELL X KWS TALLAND)

KWS Ladum is NEW to the RL as a spring Group 1 milling wheat for 2022/23.

Whilst it is recommended as a spring wheat, it can be drilled from 1st November onwards and has out performed other Group 1 winter milling wheats such as Skyfall, Crusoe and KWS Zyatt in the January drilling slot.

With many Group 1 milling wheats now breaking down to diseases such as yellow rust and very little material in the pipeline, KWS Ladum is worth considering for those milling wheat growers that are able to drill later on in the autumn.

Mildew	[8]	REGION	YIELD
Yellow Rust	6	UK Yield as % control (Autumn Sowing)	
Brown Rust	[7]	UK Yield as % control (Spring Sowing)	102
Septoria Tritici	[7]		
Straw Height without PGR	75		
OWBM	No		
Specific Weight	78.0		
Maturity	-2 -1 0 1 2 3		

## WINTER WHEAT GROUP 2

## KWS EXTASE (BOISSEAU X SOLHEIO)

KWS Extase was the most popular variety sold in the UK last harvest with a market share of 14.2%.

It has the highest untreated yield on the recommended list at 93% of control.

It is a tall variety that needs a good PGR programme and early to mature.

KWS Extase must not be drilled too early (not before 25th September) as it has a fast speed of development due to its french parentage.

Mildew	7	REGION	YIELD
Yellow Rust	8	UK	101
Brown Rust	7	EAST	100
Eyespot	3	WEST	102
Septoria Tritici (1-year rating)	7.3	NORTH	99
Septoria Tritici (3-year average)	7.8	Untreated yield	93
Resistance to lodging (+PGR)	8	Light soils	101
Resistance to lodging (- PGR)	7	Heavy soils	101
OWBM	No	First Cereal	102
Specific Weight	78.5	Second Cereal	100
Maturity	-2 -1 0 1 2 3		

# The **complete package** with *Septoria* protection built in!

## WINTER WHEAT GROUP 2

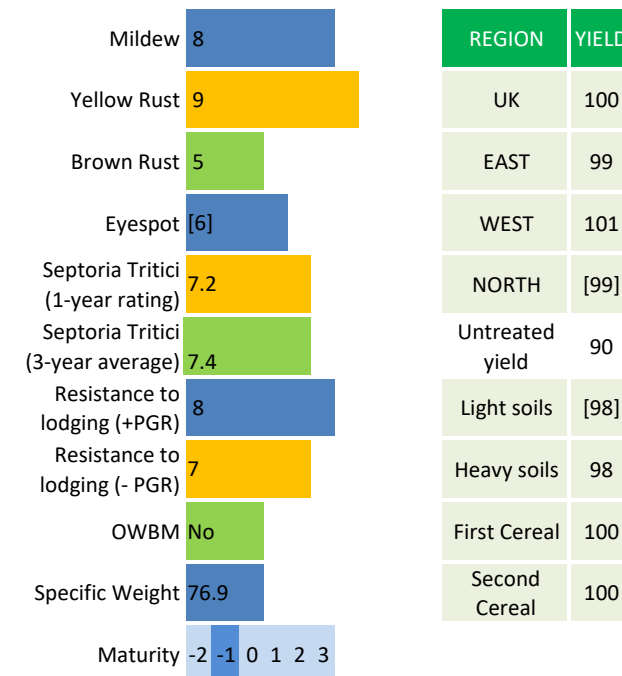
### KWS PALLADIUM (KWS ZYATT X KWS TRINITY)

A new variety added to the AHDB Recommended List.

Very high untreated yield of 90% of control with short, stiff straw and good all-round disease resistance.

Can be drilled slightly earlier than KWS Extase and performs well as a 2nd wheat.

Excellent grain quality with milling potential, accepted by the millers as a Group 2 grade.



## KWS EXTASE

- *Still* the highest untreated yield on the RL
- The most complete package in terms of disease resistance and quality on the market today
- Exceptional resistance to *Septoria tritici* - the first variety over an 8 on the market



[www.kws-uk.com](http://www.kws-uk.com)

SEEDING  
THE FUTURE  
SINCE 1856



The **super clean** bread maker with harvest security built-in



## KWS PALLADIUM

- Excellent disease resistance including 7.4 for *Septoria tritici*
- Very high untreated yield
- Short and stiff with early maturity



[www.kws-uk.com](http://www.kws-uk.com)

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## WINTER WHEAT GROUP 3

### LG ASTRONOMER ((COUGAR X LEEDS) X BRITANNIA)

In our opinion, LG Astronomer is the best Group 3 on the market, with excellent grain quality and disease profile.

Can be drilled from 15th September - Mid Feb and performs well across all soil types.

Although a relatively tall variety, LG Astronomer is very stiff strawed.

There is concern around a lot of the soft wheat varieties due to the presence of Cougar in their parentage, and its breakdown in *Septoria Tritici* resistance over the last couple of seasons. It is a complex issue as not all varieties are affected to the same extent. At present, LG Astronomer is holding up its resistance to *Septoria Tritici* well in comparison to others.







# INSPIRING CONFIDENCE

“ We chose LG Astronomer for its quality, good agronomics and disease resistance.”

John, East Yorkshire



## LG ASTRONOMER WINTER WHEAT

- Exceptional All Round Agronomic Security
- Excellent Disease Resistance
- Market Opportunities for Biscuit and Distilling



[lgseeds.co.uk/lg-astronomer](http://lgseeds.co.uk/lg-astronomer)

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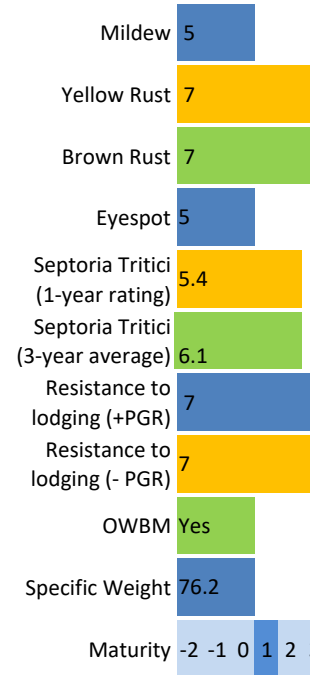
## WINTER WHEAT GROUP 3

### LG ILLUMINATE ((COUGAR X LEEDS) X BRITANNIA)

A sister variety to LG Astronomer which is slightly higher yielding and will drill slightly earlier.

LG Illuminate is one of the shorter wheat varieties on the market and is stiff strawed.

Solid all-round disease package and good resistance to sprouting.



REGION	YIELD
UK	100
EAST	100
WEST	100
NORTH	101
Untreated yield	84
Light soils	101
Heavy soils	100
First Cereal	100
Second Cereal	100



# SHINING BRIGHT IN ALL SITUATIONS



**LG ILLUMINATE**  
WINTER WHEAT

Casts new light on flexibility of drilling, market options, growing regions & conditions

@LGSeedsUK



lgseeds.co.uk/lg-illuminate

Tel: 01472 371471  
lgseeds.co.uk enquiries@limagrains.co.uk



## WINTER WHEAT GROUP 4 (SOFT)

### RGT BAIRSTOW ((REVELATION X SANTIAGO) X COUGAR)

RGT Bairstow is new onto the RL for this autumn, and is one of the highest yielding wheats on the market.

Performs well across all soil types and is a very good second wheat.

RGT Bairstow is later to mature which should be considered, but for those needing to spread the workload at harvest it is a useful variety.

It is a tall variety with average straw stiffness which is something to bear in mind on the heavier, more fertile land.

Mildew	6	REGION	YIELD
Yellow Rust	7	UK	103
Brown Rust	6	EAST	103
Eyespot	[4]	WEST	103
Septoria Tritici (1-year rating)	6.0	NORTH	103
Septoria Tritici (3-year average)	6.4	Untreated yield	85
Resistance to lodging (+PGR)	6	Light soils	[104]
Resistance to lodging (- PGR)	6	Heavy soils	104
OWBM	Yes	First Cereal	103
Specific Weight	75.9	Second Cereal	104
Maturity	-2 -1 0 1 2 3		

## WINTER WHEAT GROUP 4 (SOFT)

### LG SKYSCRAPER ( (CASSIUS X NAWW 29) X KWS SANTIAGO)

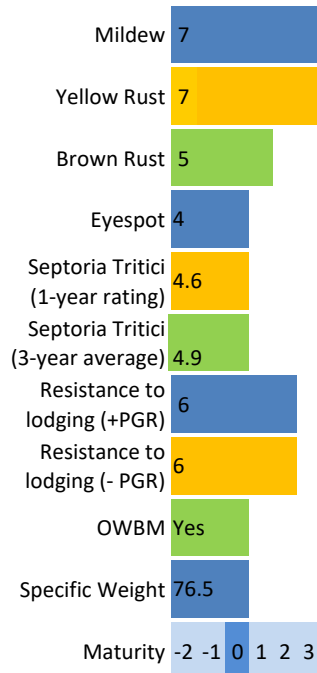
LG Skyscraper has been on the RL since 2019 and held 11% market share in autumn 2021.

It has given consistently high yields across all regions and soil types. Performs particularly well on lighter land.

Excellent performance in both the first and second wheat slot.

It is a tall variety (92cm without PGR) but is stiff strawed.

LG Skyscraper has a high tillering capacity so is very competitive against grassweeds.



REGION	YIELD
UK	103
EAST	103
WEST	103
NORTH	102
Untreated yield	82
Light soils	103
Heavy soils	103
First Cereal	103
Second Cereal	104



WHEAT

# CONSISTENT AND HIGH-QUALITY

“ I like LG Skyscraper. I was combining for a neighbour who had LG Skyscraper and noticed the yield went up 1.5 t/ha. ”  
John, Cambridgeshire



## LG SKYSCRAPER WINTER WHEAT

- High Yielding in All Situations
- Good Agronomics suitable for Blackgrass Control
- Bold Grain Quality and widely used by Distillers



lgseeds.co.uk/lg-skyscraper

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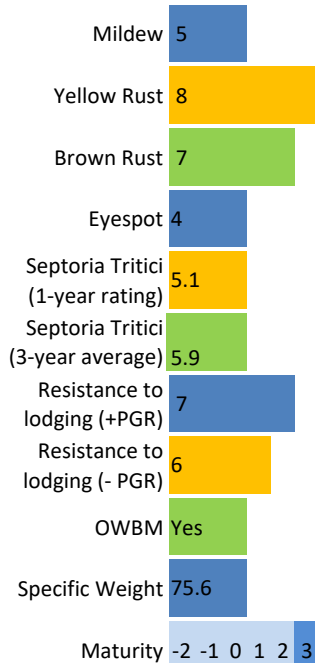
## WINTER WHEAT GROUP 4 (SOFT)

### RGT SAKI (COUGAR X KWS SANTIAGO)

RGT Saki is a high yielding wheat with a reasonable disease package and an untreated yield of 85%.

Suitable for all soil types but needs a good PGR program on heavier soils.

RGT Saki is slow to develop and late to mature which is something that should be considered on higher ground. However, for those needing to spread workload, it can be a very useful variety as part of the mix on farm.



REGION	YIELD
UK	103
EAST	103
WEST	103
NORTH	102
Untreated yield	85
Light soils	102
Heavy soils	102
First Cereal	103
Second Cereal	103

# IF THE ONLY TERM THAT EXCITES YOU IS HIGH YIELD.

...THEN YOU'RE PROBABLY MISSING OUT ON HIGH YIELDS.



**RGT**

**RGT SAKI**

G4 WINTER WHEAT

INTELLIGENT SEED BREEDING FOR FORWARD THINKING FARMERS.

[RGTSEEDS.CO.UK](http://RGTSEEDS.CO.UK)



## WINTER WHEAT GROUP 4 (SOFT)

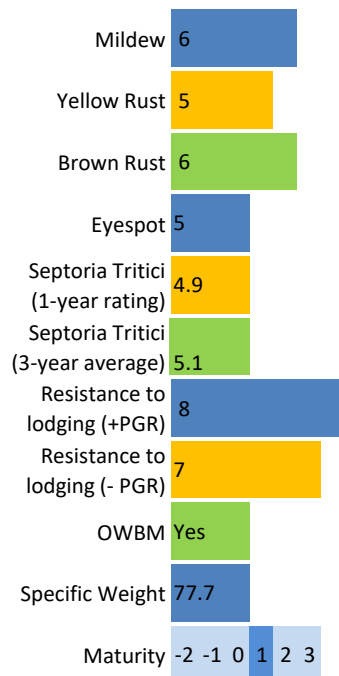
### LG SPOTLIGHT (SCRIBE X HORATIO)

LG Spotlight is a high yielding wheat which has given very consistent performance on farm over the last few years.

Exceptional grain quality - its good resistance to sprouting means it holds onto its HFN well in the field during challenging harvests.

LG Spotlight is tall but very stiff strawed. A reasonable disease package but needs watching for Yellow Rust.

In our opinion, LG Spotlight has been overshadowed by LG Skyscraper since making the RL in 2019 and is an under-valued variety on the market. Whilst it needs looking after for yellow rust, its on farm consistency and superb grain quality is hard to beat!



REGION	YIELD
UK	102
EAST	101
WEST	103
NORTH	101
Untreated yield	77
Light soils	101
Heavy soils	102
First Cereal	102
Second Cereal	101



WHEAT












# LG SPOTLIGHT

Soft feed wheat, with exceptional grain security

@LGSeedsUK   

lgseeds.co.uk/lg-spotlight

\* AHDB Recommended List 2022/23

Tel: 01472 371471  
lgseeds.co.uk enquiries@limagrain.co.uk

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## WINTER WHEAT GROUP 4 (HARD)

### CHAMPION (DSV20122 X REFLECTION)

NEW for Autumn 2022, Champion is the highest yielding wheat on the market!

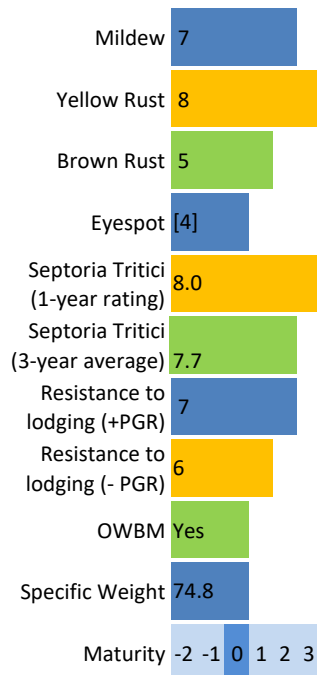
Performs very well on all soil types, particularly heavier land and is also a good second wheat

Champion is a very clean variety with good disease scores all round.

It is relatively tall (88cm) so a good PGR program is advised and not to be drilled before mid-september.

Its vigorous growth habit makes it competitive against grassweeds.

Champion is definitely worth a try for those wanting to try something new this autumn!



REGION	YIELD
UK	106
EAST	107
WEST	105
NORTH	[103]
Untreated yield	90
Light soils	[105]
Heavy soils	106
First Cereal	105
Second Cereal	107

# CHAMPION

## THE WHEAT TO BEAT



## DSV CHAMPION GROUP 4 – HARD

The ultimate barn filler with **list topping** yields  
Orange blossom midge resistance  
Robust resistance genetics against yellow rust  
Impressive scores for Septoria tritici



Innovation for  
your growth

dsv-uk.co.uk

## WINTER WHEAT GROUP 4 (HARD)

### KWS DAWSUM (KWS KERRIN X COSTELLO)

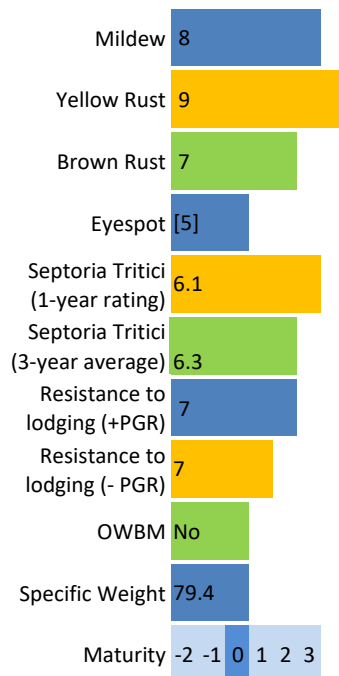
NEW for Autumn 2022, KWS Dawsum is the second highest yielding wheat on the market after Champion.

Many of you will know its parents KWS Kerrin and Costello, combining excellent yield and grain quality as well as its suitability as a second wheat.

Suitable for early drilling from the 7th September onwards.

One of the shorter, stiff strawed varieties (84cm) making it a good choice on heavier land.

If you are looking for a new variety this autumn give KWS Dawsum a try!



REGION	YIELD
UK	104
EAST	103
WEST	106
NORTH	[106]
Untreated yield	92
Light soils	[105]
Heavy soils	104
First Cereal	105
Second Cereal	104

# Now that's a **special combination!**



## KWS DAWSUM

- Exceptional specific weight (79.4 kg/hl)
- Very high yield potential across all regions of the UK
- Super flexible on farm with a wide sowing window



[www.kws-uk.com](http://www.kws-uk.com)

SEEDING  
THE FUTURE  
SINCE 1856



## WINTER WHEAT GROUP 4 (HARD)

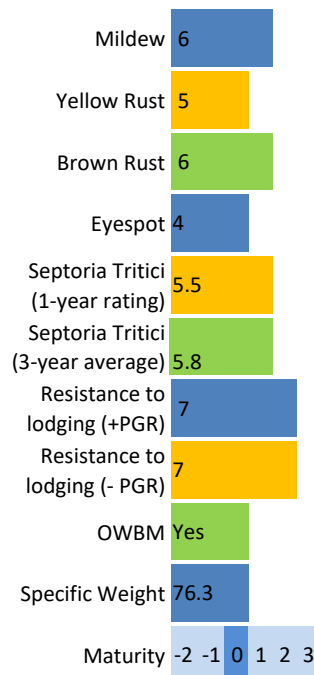
### GLEAM (HEREFORD X KWS KIELDER)

Despite being on the market since 2018, Gleam is still one of the most popular varieties on farm which once again held its market share of 12% in autumn 2021.

Wide drilling window from 1st September - Mid February.

Gleam offers great flexibility on farm due to its high yields and excellent performance in both the first and second wheat position.

Good disease package with an untreated yield of 80% but needs watching for yellow rust.



REGION	YIELD
UK	103
EAST	103
WEST	103
NORTH	103
Untreated yield	80
Light soils	103
Heavy soils	103
First Cereal	103
Second Cereal	103

# 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**

Syngenta UK Ltd. Registered in England No. 849037.  
OFC4 Capital Park, Fulbourn, Cambridge CB21 5XE  
Tel: +44 (0) 1223 883400 Technical Enquiries: +44 (0) 800 1696058  
Email: customer.services@syngenta.com Website: www.syngenta.co.uk





## WINTER WHEAT GROUP 4 (HARD)

### KWS CRANIUM (KWS CRISPIN X KWS KIELDER)

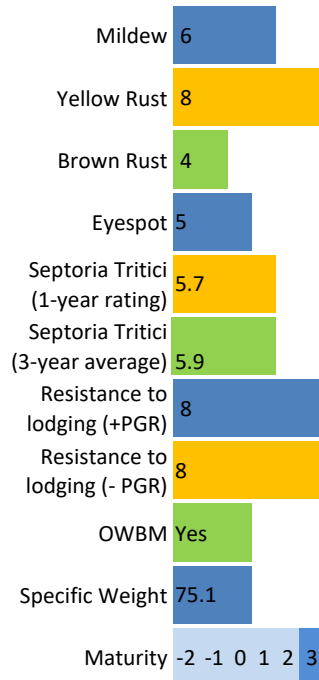
KWS Cranium was added to the RL in for autumn 2021 and should not be overlooked by some of the higher yielding wheats.

With a double 8 for standing, KWS Cranium is the stiffest variety on the RL.

It performs exceptionally well in the later drilled slot - an ideal choice after later harvested crops such as potatoes.

Its fast speed of development and vigorous growth habit makes it very competitive against grassweeds.

A later maturing variety which helps spread the workload at harvest.



REGION	YIELD
UK	102
EAST	102
WEST	101
NORTH	101
Untreated yield	79
Light soils	103
Heavy soils	100
First Cereal	102
Second Cereal	102

# The thinking farmer's wheat!

## KWS CRANIUM

- Exceptionally stiff strawed
- Outstanding late drilled performance
- Excellent combination of yield, yellow rust and OWBM resistance



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## WINTER WHEAT GROUP 4 (HARD)

## GRAHAM (PREMIO X EXPERT)

Graham has been on the RL since 2016 but still has a loyal following on farm due to its consistency.

An excellent first wheat, suitable for early drilling with a very stable disease package and untreated yield of 88%.

Good grain quality and reasonably early to mature.

		REGION	YIELD
Mildew	7	UK	102
Yellow Rust	7	EAST	100
Brown Rust	5	WEST	104
Eyespot	3	NORTH	102
Septoria Tritici (1-year rating)	6.4	Untreated yield	88
Septoria Tritici (3-year average)	6.7	Light soils	102
Resistance to lodging (+PGR)	8	Heavy soils	101
Resistance to lodging (- PGR)	7	First Cereal	102
OWBM	No	Second Cereal	101
Specific Weight	76.9		
Maturity	-2 -1 0 1 2 3		

## RGT GRAVITY (SCOUT X OAKLEY) X SANTIAGO)

RGT Gravity has been on the RL since 2018, but is still a very consistent performer on farm in either the 1st or 2nd wheat slot.

It is not the cleanest variety, but for those growers who have had RGT Gravity on farm for several years and know how to grow it, it consistently produces high yields.

Suitable for all soil types but should not be drilled early and needs a good PGR program.

		REGION	YIELD
Mildew	5	UK	101
Yellow Rust	6	EAST	102
Brown Rust	6	WEST	101
Eyespot	4	NORTH	100
Septoria Tritici (1-year rating)	4.6	Untreated yield	77
Septoria Tritici (3-year average)	4.7	Light soils	102
Resistance to lodging (+PGR)	7	Heavy soils	101
Resistance to lodging (- PGR)	6	First Cereal	101
OWBM	Yes	Second Cereal	103
Specific Weight	75.6		
Maturity	-2 -1 0 1 2 3		

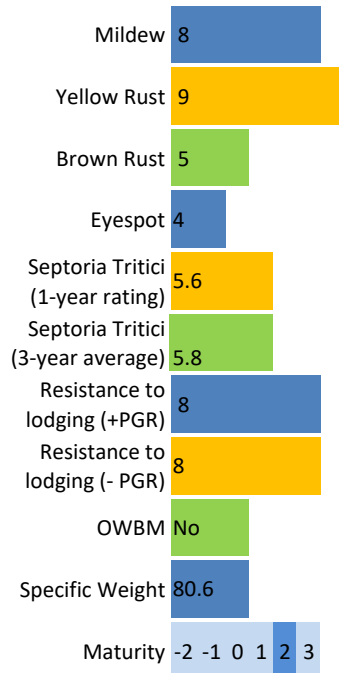
## WINTER WHEAT GROUP 4 (HARD)

### COSTELLO (W151 X TIMARU)

Like Graham, Costello has been on farm since 2015 but still remains a popular choice on farm.

Its solid disease resistance and superb grain quality, has given Costello many loyal growers and strong demand from end users.

Performs well across all soil types and stiff straw.



REGION	YIELD
UK	100
EAST	99
WEST	100
NORTH	100
Untreated yield	81
Light soils	99
Heavy soils	99
First Cereal	100
Second Cereal	99

# FIVE REASONS TO GROW Costello WINTER WHEAT

WHEAT

- 1 EXCEPTIONAL GRAIN QUALITY, WITH THE HIGHEST SPECIFIC WEIGHT ON THE AHDB RL
- 2 RESISTANT TO YELLOW RUST
- 3 CONSISTENT PERFORMANCE IN ALL SITUATIONS
- 4 SHORT, STIFF STRAW
- 5 STRONG END MARKET DEMAND

Costello will reduce your risk and enhance your profit

Tel 01223 890777 • info@senova.uk.com • @SenovaLtd

www.senova.uk.com



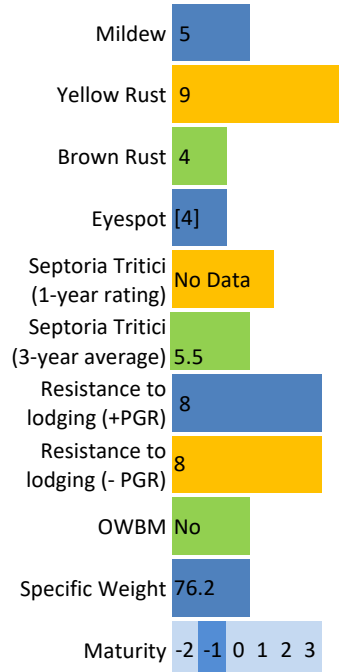
## WINTER WHEAT GROUP 4 (HARD)

### KWS PARKIN (REFLECTION X COSTELLO)

KWS Parkin narrowly missed the RL in 2020 but has a unique place on farm.

It has established itself in the market as a Grafton type replacement, due to its suitability to early drilling, short, stiff straw and early maturity.

Excellent variety for fertile sites. Reasonable disease package but needs watching for brown rust. KWS Parkin is a great variety for those looking to spread the workload at harvest or for the traditional Grafton grower looking for a replacement.



REGION	YIELD
UK	101
EAST	101
WEST	101
NORTH	100
Untreated yield	81
Light soils	100
Heavy soils	102
First Cereal	101
Second Cereal	99

Data taken from KWS figures

# Small but mighty!



## KWS PARKIN

- A unique type, unlike any variety on the current Recommended List
- Earlier maturity than any recommended variety
- Shorter and stiffer than any wheat on the market



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# DRILL DATES FOR WINTER WHEAT

Variety	Drilling Window	Second Wheat Performance
<b>KWS Zyatt</b>	20th Sept - End Jan	Excellent
<b>Skyfall</b>	Mid Oct - End Jan (Latest safe sowing date 7th March)	Good
<b>Crusoe</b>	Mid Sept - End Jan	1st wheat preferred
<b>KWS Ladum</b>	1st Nov - April	No Data
<b>Nissaba</b>	1st October - April	No Data
<b>KWS Extase</b>	25th Sept - End Jan	1st wheat preferred
<b>KWS Palladium</b>	7th Sept - Mid Feb	Good
<b>LG Astronomer</b>	15 Sept - Mid Feb	Good
<b>LG Illuminate</b>	15 Sept - Mid Feb	Good
<b>RGT Bairstow</b>	Mid Sept - End Feb	Good
<b>LG Skyscraper</b>	25th Sept - End Jan	Good
<b>RGT Saki</b>	Mid Sept - End Jan	Good
<b>LG Spotlight</b>	25th Sept - End Feb	1st wheat preferred
<b>Champion</b>	20th Sept - Mid Feb	Good
<b>KWS Dawsum</b>	7th Sept - End Jan	Good
<b>KWS Cranium</b>	Mid Sept - End Jan	Excellent
<b>Gleam</b>	1st Sept - Mid Feb	Excellent
<b>Graham</b>	1st Sept - End Jan	1st wheat preferred
<b>RGT Gravity</b>	End Sept - End Jan	Excellent
<b>Costello</b>	12th Sept - End Jan	1st wheat preferred
<b>KWS Parkin</b>	1st Sept - End Jan	Good

# WINTER OATS

## RGT SOUTHWARK

The highest yielding winter oat variety on the AHDB Recommended List.

Offers a good specific weight.

A very tall variety which is early to mature and harvest.

Mildew (1-9)



Crown Rust (1-9)



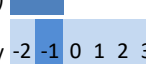
Resistance to Lodging (-PGR)



Straw Length without PGR (cm)



Maturity



REGION	YIELD
Breeder	RAGT
UK yield (% treated control)	104
Kernel content (%)	72.9
Specific Weight (kg/hl)	53.6
Screenings (2.0mm)	5.5
Screenings (1.8mm)	N/A

## DALGUISE

An early maturing variety with good specific weight and decent grain quality.

It has weak lodging resistance.

Dalguise is susceptible to crown rust and mildew.

Mildew (1-9)



Crown Rust (1-9)



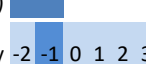
Resistance to Lodging (-PGR)



Straw Length without PGR (cm)



Maturity

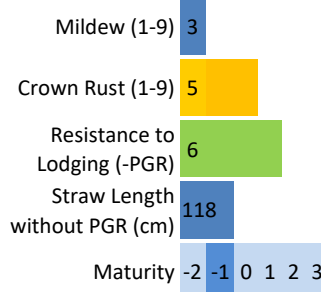


REGION	YIELD
Breeder	Senova
UK yield (% treated control)	100
Kernel content (%)	73.0
Specific Weight (kg/hl)	54.2
Screenings (2.0mm)	3.5
Screenings (1.8mm)	N/A

## WINTER OATS

### RGT LINEOUT

A high yielding oat which is early to mature.



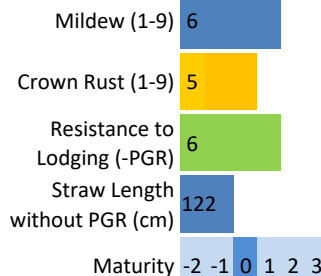
It has decent resistance to crown rust but needs watching for mildew.

High yields and moderately stiff straw.

REGION	YIELD
Breeder	RAGT
UK yield (% treated control)	100
Kernel content (%)	73.1
Specific Weight (kg/hl)	52.2
Screenings (2.0mm)	6.2
Screenings (1.8mm)	N/A

### MASCANI

Mascani is the most popular milling oat variety with millers.



The highest kernel content of all varieties.

Very low screenings.

Mascani has the best all round disease package of all the husked winter oats.

REGION	YIELD
Breeder	Senova
UK yield (% treated control)	97
Kernel content (%)	76.4
Specific Weight (kg/hl)	53.3
Screenings (2.0mm)	1.7
Screenings (1.8mm)	N/A

## WINTER RYE

### HYBRID WINTER RYE

#### KWS TAYO

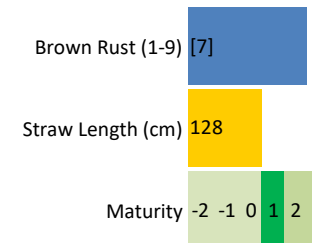
The highest yielding hybrid rye variety on the market.  
KWS Tayo is a multi-purpose hybrid suitable for AD or grain.

Excellent stem stiffness with high straw yields.

Benefits from the KWS PollenPlus technology to minimise ergot infection.

Good Drought tolerance and high harvest index (grains/ear).

**Seed Rates (seeds/m<sup>2</sup>):**  
Sept - 200-220 seeds/m<sup>2</sup>  
Oct - 250+ seeds/m<sup>2</sup>



REGION	YIELD
Breeder	KWS
UK yield (% treated control)	104
Protein (%)	9.6
HFN	259
Specific Weight (kg/hl)	76.6
Wholecrop silage maturity (% DM)	30-40



# Join the #ryevolution!



## KWS TAYO

- New generation PollenPlus® hybrid with excellent stem stiffness
- Multi-purpose hybrid (AD or grain; feed, flour and distilling)
- No.1 harvest index (grains/ear) to drive grain yield



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## HYBRID WINTER RYE

### KWS SERAFINO

High yielding variety offering maximum yield performance for both wholecrop or grain.

Brown Rust (1-9) 7

Straw Length (cm) 130

Multi-purpose variety suitable for both AD and grain.

Maturity -2 -1 0 1 2 3

Benefits from the KWS PollenPlus technology to minimise ergot infection.

Excellent stem stiffness and brown rust resistance.

**Seed Rates (seeds/m<sup>2</sup>):**  
Sept - 200-220 seeds/m<sup>2</sup>  
Oct - 250+ seeds/m<sup>2</sup>

REGION	YIELD
Breeder	KWS
UK yield (% treated control)	102
Protein (%)	9.5
HFN	258
Specific Weight (kg/hl)	76.7
Wholecrop silage maturity (% DM)	30-40

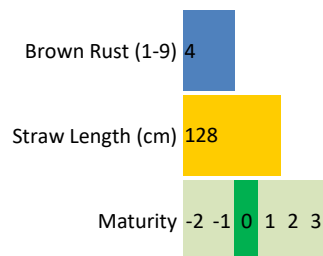
## HYBRID WINTER RYE

### SU PERFORMER

SU Performer has been on the market since 2017 and is an established variety in the market.

It can be grown for either AD or grain production.

Good lodging resistance.



REGION	YIELD
Breeder	Saaten Union
UK yield (% treated control)	100
Protein (%)	9.5
HFN	244
Specific Weight (kg/hl)	77.4
Wholecrop silage maturity (% DM)	30-40



## OILSEED RAPE

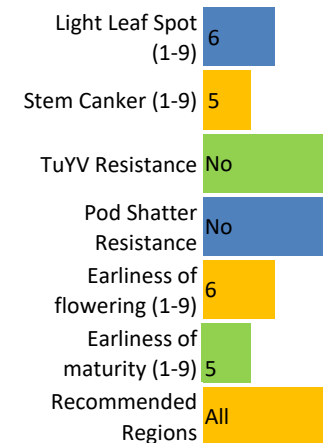
### CONVENTIONAL OILSEED RAPE

#### ACACIA - CONVENTIONAL

Acacia is the most popular conventional variety on the market at present, with good autumn and spring vigour.

It is a Anastasia cross which has attracted many traditional Anastasia growers over the last couple of seasons. Suitable for drilling from end July - mid September.

Consistent performance on farm with good yields and straw strength.



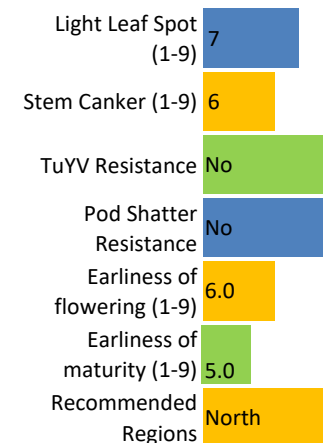
AGRONOMIC DATA	
Breeder	LG
UK Output (%)	104
E/W Output (%)	104
Lodging Resistance	8
Plant Height (cm)	145
Oil Content	45.3%
RL status	2022/23

#### BLAZEN - CONVENTIONAL

Blazen has been on the market since 2020 with reasonable yields.

It is marketed under the KWS Oilseed Establishment Partnership - an establishment scheme which shares the risk of establishment between KWS and the grower.

Short, stiff straw and good autumn and spring vigour.



AGRONOMIC DATA	
Breeder	KWS
UK Output (%)	99
E/W Output (%)	98
Lodging Resistance	[8]
Plant Height (cm)	148
Oil Content	44.5%
RL status	2022/23



## HYBRID OILSEED RAPE

### DK EXSTAR - HYBRID

DK Exstar benefits from the Dekalb pod shatter resistance gene and Double Phoma

Light Leaf Spot (1-9) **8**

Stem Canker (1-9) **8**

Suitable for early drilling.

TuYV Resistance **No**

Rapid autumn and spring development to combat CSFB and larvae pressure.

Pod Shatter Resistance **Yes**

Earliness of flowering (1-9) **6**

Earliness of maturity (1-9) **6**

Available on establishment scheme.

Recommended Regions (Dekalb Data) **All**

#### AGRONOMIC DATA

Breeder	Dekalb
AHDB Yield (t/ha)	5.46
Lodging Resistance	9
Plant Height (cm)	162
Oil Content	45.3%
RL status	No

### LG AUCKLAND - HYBRID

LG Auckland is a new variety for Autumn 2022 - it sits joint top for yield alongside PT303.

Light Leaf Spot (1-9) **7**

Stem Canker (1-9) **7**

Good autumn vigour and fast to grow away in the spring - can be drilled from early August through to the end of September. It is early to flower and relatively early to mature.

TuYV Resistance **Yes**

Pod Shatter Resistance **Yes**

Earliness of flowering (1-9) **7**

Earliness of maturity (1-9) **6**

Recommended Regions **UK**

LG Auckland benefits from the fully loaded traits from the Limagrain breeding program - TuYV, pod shatter and RLM7 phoma resistance genes.

#### AGRONOMIC DATA

Breeder	LG
UK Output (%)	107
E/W Output (%)	108
Lodging Resistance	[8]
Plant Height (cm)	155
Oil Content	45.4%
RL status	2022/23

DK Exstar

# Risk buster



**For reliability that really adds up choose DK Exstar**

- Class-leading phoma & light leaf spot resistance **8 + 8**
- Exceptional lodging resistance & stem stiffness **9 + 8**
- Ideal autumn and spring growth habit **Rapid + Rapid**

The #DEKALBdifference in OSR

**The first choice for early drilling**

DEKALB® is a registered Trade Mark of the Bayer Group. For further information, including contact details, visit [www.cropscience.bayer.co.uk](http://www.cropscience.bayer.co.uk) or call 0808 1969522. © Bayer CropScience Limited 2021



## HYBRID OILSEED RAPE

### AMBASSADOR - HYBRID

Ambassador has been on the market since 2020 and is now one of the most popular hybrids.

It has excellent autumn and spring vigour suited for drilling from mid August - mid September.

Resistant to TuYV, moderately good resistance to light leaf spot and stem canker.

Light Leaf Spot (1-9)	7
Stem Canker (1-9)	7
TuYV Resistance	Yes
Pod Shatter Resistance	Yes
Earliness of flowering (1-9)	7
Earliness of maturity (1-9)	6
Recommended Regions	UK

AGRONOMIC DATA	
Breeder	LG
UK Output (%)	106
E/W Output (%)	106
Lodging Resistance	8
Plant Height (cm)	154
Oil Content	45.0%
RL status	2022/23

### AURELIA - HYBRID

Aurelia was our most popular hybrid last autumn with very consistent performance on farm and high yields.

Excellent autumn and spring vigour to aid establishment and grow away from early season pest and disease pressure. Suitable for drilling from early August - mid September.

Aurelia benefits from TuYV, pod shatter and RLM7 phoma resistance genes.

Light Leaf Spot (1-9)	7
Stem Canker (1-9)	7
TuYV Resistance	Yes
Pod Shatter Resistance	Yes
Earliness of flowering (1-9)	7
Earliness of maturity (1-9)	5
Recommended Regions	All

AGRONOMIC DATA	
Breeder	LG
UK Output (%)	105
E/W Output (%)	105
Lodging Resistance	8
Plant Height (cm)	150
Oil Content	45.0%
RL status	2022/23



“THE VIGOUR  
SIDE OF AURELIA  
IS JUST TERRIFIC”

Robert, Scottish Borders



**AURELIA FULLY LOADED HYBRID**

The UK's Number 1 Oilseed Rape Variety



[lgseeds.co.uk/aurelia](https://lgseeds.co.uk/aurelia)

Limagrain

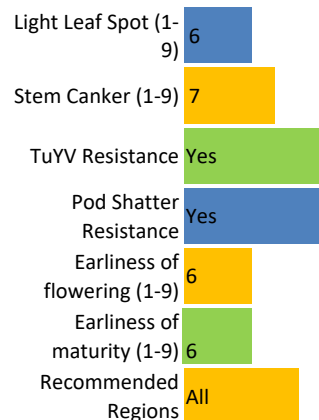
## HYBRID OILSEED RAPE

### ARTEMIS - HYBRID

Artemis is a great all rounder out of Limagrain's strong portfolio of rape varieties which we have exclusive access to.

Stiff strawed, relatively early to flower and mature as well as good oil content.

TuYV, Pod Shatter and RLM7 phoma resistance.



#### AGRONOMIC DATA

Breeder	LG
UK Output (%)	104
E/W Output (%)	104
Lodging Resistance	8
Plant Height (cm)	157
Oil Content	45.4%
RL status	2022/23

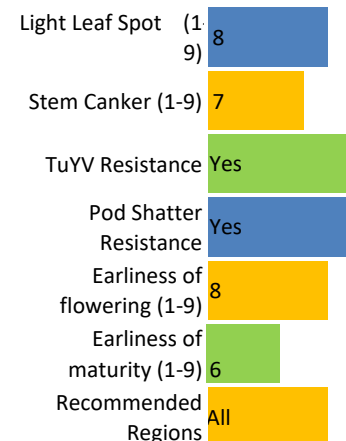
### LG AVIRON - HYBRID

LG Aviron is Limagrains most vigorous variety with exceptional autumn and spring vigour.

Suited for drilling from 2nd week in August - end September.

Highest Light Leaf Spot score on the RL.

TuYV, Pod Shatter and RLM7 phoma resistance as well as Limagrain's N-Flex technology.



#### AGRONOMIC DATA

Breeder	LG
UK Output (%)	105
E/W Output (%)	105
Lodging Resistance	[7]
Plant Height (cm)	156
Oil Content	44.3%
RL status	2022/23



HYBRID OILSEED RAPE



# FULLY LOADED HYBRIDS



## ARTEMIS

High yielding hybrid with a strong agronomic package and proven on-farm performance

@LGSeedsUK



lgseeds.co.uk/artemis

Tel: 01472 371471  
lgseeds.co.uk enquiries@limagrain.co.uk

Limagrain

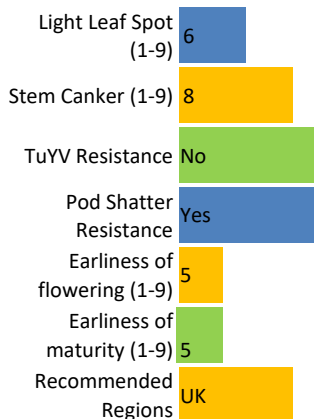
## CLEARFIELD OILSEED RAPE

### DK IMPRINT CL - CLEARFIELD

DK Imprint is a clearfield variety with good agronomic characteristics, although there are some other higher yielding options.

Rapid autumn and spring vigour to help grow away from CSFB adult, larvae or any other threats.

Double Phoma and Pod Shatter Resistance. Available on establishment scheme.



#### AGRONOMIC DATA

Breeder	Dekalb
UK Output (%)	92
E/W Output (%)	92
Lodging Resistance	[8]
Plant Height (cm)	158
Oil Content	43.7%
RL status	2022/23

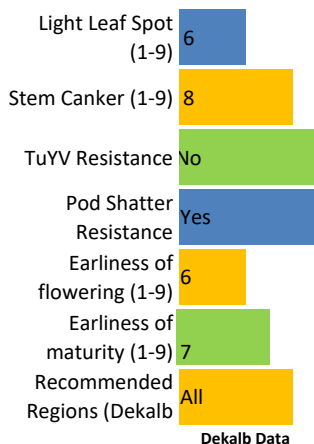
### DK IMOVE CL - CLEARFIELD

DK Imove is Dekalb's NEW clearfield variety, which is a step on in yield from the likes of DK Imprint.

Good foliar disease resistance, as well as rapid autumn and spring development.

Benefits from double phoma and pod shatter resistance.

Available on establishment scheme.



#### AGRONOMIC DATA

Breeder	Dekalb
AHDB Yield (t/ha)	5.01
Lodging Resistance	8
Plant Height (1-9)	3
Oil Content	44.5%
RL status	No

Dekalb Data

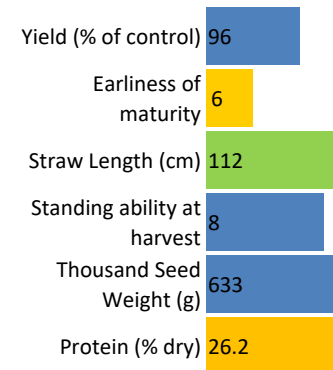
## WINTER BEANS

### TUNDRA

Despite being on the PGRO descriptive list since 2014, Tundra is a firm favourite for growers wanting to achieve export for human consumption.

A large seed size with a pale hilum.

A short plant, so good standing.

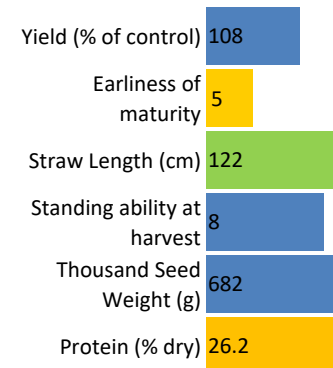


### VESPA

Top of the PRGO Descriptive List 2022 for yield.

Slightly earlier to ripen than Tundra.

Suits both the feed and human consumption market.







## The Winter Bean creating a real buzz!

With the highest yields on the PGRO Descriptive List, excellent standing ability and large grain, pale hilum variety Vespa is the perfect choice for your rotation and the feed and export markets.

### Winter beans – the perfect fit

Yield benefit for the following wheat crop

Low growing cost

Good break crop gross margin

Good opportunity to control grass weeds

Ready markets for feed and export use

Other Senova winter bean varieties:



Tel 01223 890777 • [info@senova.uk.com](mailto:info@senova.uk.com) • [@SenovaLtd](https://twitter.com/SenovaLtd)  
[www.senova.uk.com](http://www.senova.uk.com)

## SEED DRESSINGS

### SINGLE PURPOSE



**Redigo Pro** - winter & spring wheat, spring oats and barley, rye and triticale

Active substances: Prothiconazole and tebuconazole. Its two advanced actives work together by acting inside the germinating seedlings.

#### Broad –spectrum control:

- Septoria – seedling blight and stem base browning : improves the health of stem base by reducing symptoms caused by Microdochium nivale and Fusarium SPP
- Loose smut in winter & spring barley
- Seed-and soil-borne bunt
- Blue mould
- Ergot: reduces germination of treated ergot particles
- Leaf stripe – partial control of Pyrenophora Graminea in winter and spring barley (not crops grown for multiplication)

For more information on Redigo Pro, please see [www.bayercropscience.co.uk](http://www.bayercropscience.co.uk)



**Raxil Star - winter barley** is a specialist fungicide seed treatment for winter barley (must not be planted between 1 February and 31 August). It protects your crop from a broad spectrum of seed-borne diseases, helping to ensure excellent establishment and improve crop performance and quality. Raxil Star is the best single purpose dressing for winter barley.

- Controls seed-borne net blotch, loose smut, leaf stripe and covered smut
- Reduces Fusarium and microdochium seedling blight and stem-base browning
- Optimises establishment
- Allows retrieval of infected certified seed stocks

For more information on Raxil Star please see [www.bayercropscience.co.uk](http://www.bayercropscience.co.uk).



## Your seed treatment *choice matters.*

The start of a new growing season is your opportunity to control the hidden diseases which can impact your harvest. Redigo Pro provides the **broadest protection** from **all major seed- & soil-borne diseases** in your barley & wheat crops and can also help **reduce ergot contamination**<sup>\*1</sup>. Secure the best protection from day one by specifying Redigo Pro when ordering your seed this season.

Discover more about the hidden diseases that could be lurking in your crop at [crops.science.bayer.co.uk/hiddendiseases](https://crops.science.bayer.co.uk/hiddendiseases)



Ergot is the third most common cause of load rejection upon sale for malting barley<sup>\*2</sup>

<sup>\*1</sup>Based on CRD-approved label recommendations on 6th June 2018. All details correct at time of going to press.

<sup>\*2</sup>MAGB annual survey 2007-2016, <http://www.ukmalt.com/annual-survey-rejections-barley-uk-malting-sites>

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.crops.science.bayer.co.uk](https://www.crops.science.bayer.co.uk) or call 0800 1969522. © Bayer CropScience Limited 2021

## SPECIALIST DRESSINGS



**Vibrance Duo** – Winter wheat, winter barley, winter triticale, winter rye, spring barley, spring wheat and spring oats. Vibrance Duo is a fungicide SDHI-based (succinate dehydrogenase inhibitors) seed treatment for better establishment and rooting. Vibrance Duo offers an opportunity to give crops a vibrant start from outstanding control of key diseases, aiding rapid crop establishment with improved rooting.

Vibrance Duo has clear benefits for improving root growth, which combined with its excellent disease control, helps the crop achieve its full genetic potential.

### Benefits include:

- Improved scavenging for soil moisture
- Improved uptake of nutrients
- More resilient plants – to stress, pests and diseases
- Maximised prospects for successful over-wintering
- Controls a broad spectrum of diseases that threaten crop establishment including Fusarium, Microdochium, Bunt, Loose Smut and Rhizoctonia
- Faster emergence
- SDHI sprays can still be applied – sedaxane forms a protective zone around the seed, root and stem base in the soil zone
- Low dust-off
- Compatible to be co-applied with Latitude

For further information, please see: [www.syngenta.co.uk/vibrance-duo](https://www.syngenta.co.uk/vibrance-duo)



**Kinto Plus** – Winter wheat, winter barley, rye, triticale, oats. Active substances: Xemium 33.3g/L, fludioxonil 33.3g/L and triticonazol 33.3g/L

Kinto Plus is a new product for this Autumn from BASF, offering a unique combination of three complimentary active ingredients which gives outstanding control of all major seed and soil-borne diseases which threaten crop establishment and seed quality. Comprehensive and long lasting efficacy against all seed borne seed diseases. Enhanced rooting and germination ensures better crop establishment. Optimal protection against all weather conditions. Securing yield potential.

In our opinion, Kinto Plus on winter barley is worth considering to aid crop emergence and establishment.

For further information on Kinto Plus, please see: [www.agrcentre.basf.co.uk](https://www.agrcentre.basf.co.uk)



# CHANGE YOUR PERSPECTIVE FOCUS ON ROOT HEALTH & ENHANCE ESTABLISHMENT

Now approved for use  
on the following crops:

- ✓ Winter wheat
- ✓ Spring wheat
- ✓ Winter barley
- ✓ Spring barley

**ROOTING  
POWER™**



**Vibrance® Duo** 

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VIBRANCE® Duo, ROOTING POWER™ and the SYNGENTA logo are Trademarks of a Syngenta Group Company. VIBRANCE® Duo (MAPP 17838) contains fludioxonil and sedaxane. Use plant protection products safely. Always read the label and product information before use. For further product information including warning phrases and symbols refer to [www.syngenta.co.uk](http://www.syngenta.co.uk) March 2021. 11403

## SPECIALIST DRESSINGS



### Latitude – winter wheat & barley

125 g / litre (11.83% w/w) of Siltthiofam. The only specialist take-all seed treatment:

- Maximises yield and quality wherever take-all is a problem
- Increases yield and quality of winter cereals
- Provides facility to drill second wheat earlier
- Improves nutrient and water uptake
- Reduces take all
- Must be co-applied with a single purpose treatment

[www.monsanto-ag.co.uk](http://www.monsanto-ag.co.uk)



### Signal 300 ES – Winter wheat and winter barley

Active Substances: 300 g/l cypermethrin

Signal 300 ES is an insecticide seed treatment, which by contact and ingestion, gives protection against wheat bulb fly and wireworm.

It is the only seed dressing available for the control of wheat bulb fly and wireworm after the loss of Austral Plus and provides a 'zone of protection' around the seed, improving crop establishment even under the most challenging of pest infestations. Signal 300 ES provides excellent coverage and distribution on the seed and is compatible with a range of fungicide seed treatments.

## NUTRITIONAL SEED DRESSINGS

### Where do nutritional seed dressings help?

- Where soil or leaf analysis has shown deficiency
- High soil pH
- Soils with high organic matter/receive regular manure applications
- Sandy soils
- Cold/Wet soils

### Early season nutrient roles within plants

- Phosphate – Key for root and shoot development.
- Manganese- Essential for chlorophyll synthesis and lignin production.
- Copper – Lignin synthesis and plant respiration.
- Zinc – responsible for the utilisation of auxins which regulate plant growth and helps with disease tolerance.



**Manganese Trio** – suitable for all cereals, pulses, oilseed rape and maize.

Treating seed with Manganese is the most effective way to eliminate cereals from early season deficiency to aid plant emergence and crop establishment. It also gives flexibility for foliar autumn applications when field conditions are challenging and travelling is an issue.

#### *Manganese Trio Seed Treatment Analysis*

- 10% Soluble Manganese (Mn)
- 16.3% Sulphur Trioxide
- 1.0% Copper (Cu)
- 0.5% Zinc (Zn)



**Kick Off** – suitable for all cereals, pulses, oilseed rape and maize.

#### *Kick Off Seed Treatment Analysis*

- 180g/l – Phosphate/Phosphite
- 80g/l – Manganese
- 16g/l – Zinc
- 20g/l – Nitrogen
- 40g/l – Potassium

Kick Off is a phosphate/phosphite based seed treatment which promotes both root and shoot development to aid plant emergence and establishment. Kick Off is suitable for all soil types and is particularly useful in later drilled situations and where seedbed conditions are challenging.

As well as seedbed conditions, soil pH has a big impact on nutrient availability. For example, the Yorkshire Wolds are renowned for their calcareous, chalky soils and naturally have a high soil pH. Subsequently, nutrients such as phosphate, manganese, copper and zinc are easily locked up from plant available forms, even if soil analysis results show adequate indices.

Applying these nutrients to your seed helps to eliminate early season deficiency, enhance plant emergence and build yield potential.



**Zest** – a new phosphite based seed treatment for beans in 2021. Similar to Kick Off in cereals, it is a phosphite based dressing to aid early rooting. This product contains phosphite plus potassium, sulphur, manganese, zinc, amino acids and molybdenum – an important nutrient for successful pollination.



## BIOSTIMULANT SEED DRESSINGS:

**TIROS** seed treatment is comprised of a unique combination of endophytes which enable all crops to fix nitrogen, sequester phosphorous, potassium and zinc, and better withstand drought stress.

Plants have had associations with micro-organisms since they first appeared on earth. This biological biome confers many properties to the plant – enhanced nutrient availability, growth promotion, abiotic and biotic stress support, in plant detoxification and siderophore production.

The endophytes from the University of Washington have been specially selected to fix atmospheric nitrogen and sequester other nutrients from the soil. They live within the whole plant from root to shoots.

The seed treatment's proven abilities mean that crops require less artificial fertiliser, which is good news for the environment as well as a farmer's bottom line. Please ring us for more details if you are interesting in trying some TIROS this autumn!

### ONE SMALL STEP FOR MAN ONE GIANT LEAP FOR BRITISH AGRICULTURE



## TIROS

- ✓ Optimise germination & establishment
- ✓ Increase root and shoot biomass
- ✓ "Endophytes" are living biology within the plant
- ✓ Fix atmospheric Nitrogen
- ✓ Enhance nutrient uptake throughout the season to maximise crop growth
- ✓ Reduce abiotic stress
- ✓ Solubilise and mobilise soil phosphorus into and within the plant
- ✓ Optimise green leaf area
- ✓ Maximise yield – average yield response 0.55 t/ha over equivalent farm standard



**unium bioscience Ltd**

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Please do not hesitate in contacting Mortimers to arrange a visit to your farm to discuss individual requirements / objectives. Using the best seed treatment available is a sound investment, especially on varieties with specific weaknesses.

## SMALL SEEDS

**We sell a full range of grass mixtures, cover crops and companion mixes – please get in touch to discuss your requirements for Autumn 2022.**

### Environmental Mixes 2023:

From January 2023, we will be able to mix game cover and environmental mixes on site to order. We will be sending a brochure out for next season with more details!

### COMPANION CROPS



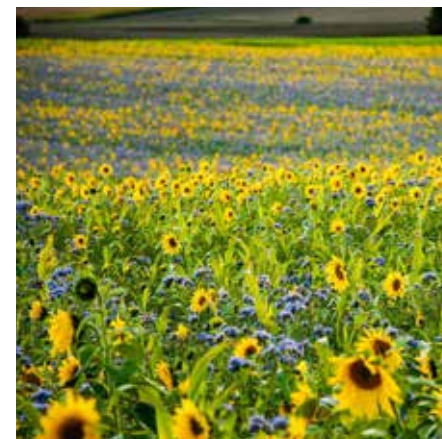
### COVER CROPS



### GRASS MIXES



### GAME COVER



## FERTILISERS

To support your growing crops we sell a full range of fertilisers including:

- Nitrogen and Compounds
- Urea Blends
- NPK Blends
- Straights Liquids



## USEFUL CONTACTS

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