



agrovista
seeds

Cereals and oilseed rape

key varieties

2025
season

growing through
innovation

Simplified choice

Expertly selected

Our expertise and rigorous assessment of both established and new seed varieties enable us to offer you a superior, short-listed selection.

We simplify your seed decision process, giving you more time to focus on your farm.



agrovista.co.uk/seeds

#SeedTheDifference



Welcome

to Agrovista's seed varieties brochure 2025

Uncertainty seems to be very much the theme of modern farming, whether its agronomically with ever changing pest or disease pressure, politically with policy changes at UK level or internationally with the vast cast of characters able to affect commodity prices at a moments notice.

Regardless of where these challenges and uncertainties come from successful establishment remains key to profitable cropping and clearly this all starts with seed.

High quality seed selection has always been a recognised criterion at Agrovista but I'm pleased to announce this autumn we have decided to progress this one step further with the introduction of our *Establishment Plus* seed across our cereal range as standard.

Establishment Plus seed has been harvested from our seed crops treated with 3ALO T6P 'which regulates important metabolic and developmental processes within plants' and has shown in trials to give an improved establishment, increased ears per m² and ultimately yield benefits to the following seed i.e. your crop.

Establishment Plus seed, variety focus, nutrition and targeted use of specific seed treatments will play a critical role in successful establishment this autumn.

This brochure outlines the benefits that our autumn 2025 selection of varieties, seed treatments and companion plants offer to help aid establishment on your farm, where they will fit within your rotation and ultimately provides all the key information to maximise your gross margin.

Also, I am pleased to launch our advertising campaign "seed the difference" which encapsulates the teams drive to simplify our seed offer for you. Countless days go into analysing all varieties and presenting you the select few that we believe to really bring value to you and your farms.

Our winter wheat offering remains focused on reliability with Mindful, Sartorial and Alvius sitting within Agrovista's hand-picked portfolio of wheats focused on yield, pest and disease resistance, end markets, drilling date flexibility, varietal diversification, and regenerative farming practices. We have also highlighted Treble 4 as "one to watch" for next harvest.

Within barley, our offering will be focused on hybrids, BYDV resistance traits and of course two row feeds with Resolute very much at the forefront of our offer. Resolute continues to offer competitive and consistent yields nationally alongside an exceptional quality, straw and agronomic package.

In addition to our varieties this autumn we will be running with our usual and extensive mix of seed treatments. Of note is Voltek Bio & Tiros Max which help ensure successful establishment, improve crop nutrition and ultimately increase yield.

The bio-stimulant metabolite Voltek Bio enhances germination and improves establishment by increasing root and shoot biomass, whilst Tiros max, contains nitrogen fixing bacteria which colonise the plant and helps produce nitrogen for the growing crop.

Outside of cereals our OSR portfolio includes all the key technology traits- Clearfield, Clubroot and Sclerotinia tolerance, TuYV, Pod shatter, RLM7 and LepR1 stem canker and strong vigour.

In addition to these variety traits we are continuing our establishment risk sharing scheme on our selected hybrid and conventional OSR varieties.

If you would like to discuss any of the areas highlighted in this brochure, please speak to your local Agrovista agronomist who will be able to offer advice tailored to your farm.



TED WILLIAMS
Arable Product Manager

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Establishment Plus seed



Autumn 2025 sees the launch of Agrovista's Establishment Plus seed. Establishment Plus seed is designed to improve crop establishment by enhancing seed health and ultimately increase yield.

This process of producing Establishment Plus seed begins with our seed crops. These crops are treated with the product 3 ALO T6P which is a unique foliar treatment that maximises seed and grain filling to optimise yield potential and increase seed health.

In manufacturer trials seed taken from crops treated with 3 ALO T6P gave up to a 15% increase in plants per m² in the autumn, an improved crop biomass, a subsequent increase in ears per m² in the spring, which led to an **8%** increase in yield over non treated seed in a first wheat situation.

What is 3 ALO T6P

3 ALO T6P is an advanced biostimulant technology containing a precursor to Trehalose-6-Phosphate (T6P)—a central regulatory sugar signal that governs critical metabolic and developmental pathways in plants.

T6P plays a key role in carbon allocation and carbohydrate homeostasis, particularly in the regulation of sucrose, the primary product of photosynthesis and a vital energy source for grain filling.



Seedling on right taken from a crop treated with 3 ALO T6P

By modulating the trehalose pathway, 3 ALO T6P enhances the mobilisation and translocation of sucrose into developing kernels or seeds.

This targeted action not only promotes starch biosynthesis but also improves source-sink dynamics, resulting in enhanced grain size, higher yield potential, and improved stress resilience, particularly under drought conditions.

Establishment Plus will be provided on all cereal seed as standard

T6P and seed enhancement



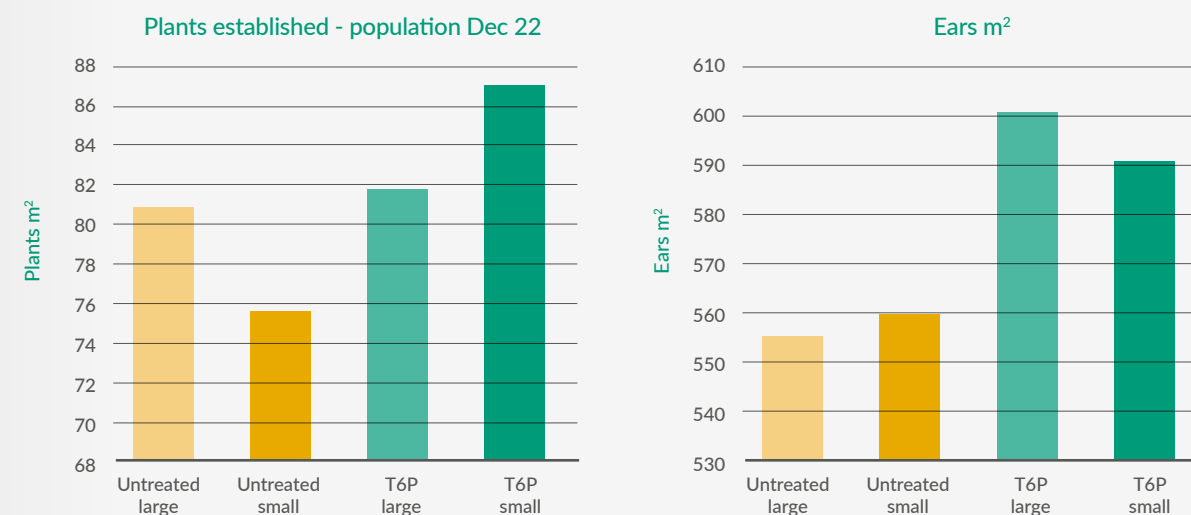
Small grain seed
TGW 39

Large grain seed
TGW 59

Small grain seed
TGW 39 T6P Trt mother crop

Large grain seed
TGW 59 T6P Trt mother crop

Seed from a crop treated with 3 ALO T6P



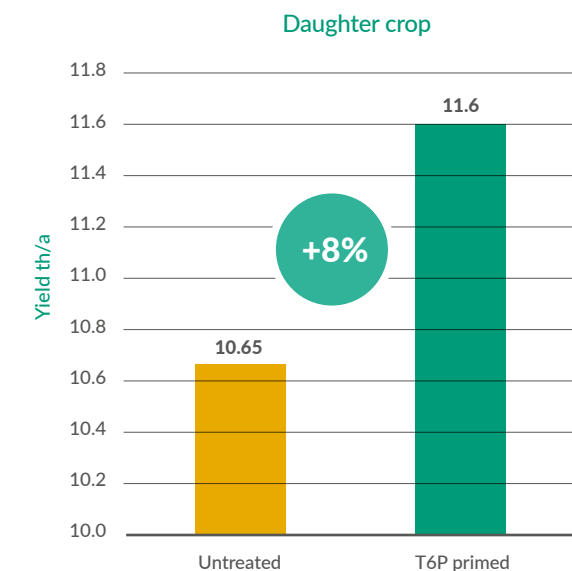
Independent research supports these findings, showing that enhancing T6P activity during seed development produces **more nutrient-dense grain which gives enhanced seed quality and better-established crops.**

This improvement in maternal seed quality carries forward, delivering a yield advantage not only in the treated crop but also in the next generation.

At Agrovista, we combine science-led innovation with practical agronomy to deliver measurable on-farm benefits. From seed to harvest, our Establishment Plus initiative reflects our commitment to you by providing cutting-edge solutions such as 3 ALO T6P and beyond; designed to maximise genetic potential, drive yield, and improve gross margins.

With this in mind we have decided to provide Establishment Plus seed as standard across our cereal seed portfolio at **no additional cost** to help get your crops to maximise their potential.

The Impact of the 3 ALO T6P primed seed on a first wheat 2020





Wheat varieties

Agrovista
exclusive

Alvius Wheat

Since its launch in 2022 Alvius has become a key management tool and dependable varietal selection for growers across the UK with the increasingly unpredictable autumn weather conditions.

Alvius, originally designed to follow late lifted crops such as sugar beet, potatoes and maize has found favour with growers also looking for improved flexibility on farm.

Alvius gives opportunities for delayed drilling for blackgrass management, those wanting to spread workload and those wanting the flexibility to drill in the spring if late autumn weather conditions are poor.



WHEAT VARIETIES

Alvius

- Alvius offers an alternative functionality to crop establishment in 21st Century farming
- Ideally suited to follow roots where seedbeds may be compromised, Alvius has a six-month drilling window, with an approximate 1t/ha yield advantage to Belepi relative to drilling date
- Limited trials from UK-grown seed indicate possible high quality milling potential with high protein and specific weight across all drilling positions
- Alvius has not been through the UK VL trials process so cannot be directly compared to other wheats in this brochure
- For further reading, please visit the Alvius page in the wheat varieties section of our website: www.agrovista.co.uk/seeds/wheat-varieties/alvius

Mildew	(9)
Yellow rust	(6)
Brown rust	(6)
Septoria tritici	(5.6)
Fusarium	6
Resistance to lodging	(7)
Eyespot	-
OWBM	-
Maturity	-2 -1 (0) 1 2

REGION	YIELD
Yield assessments to date based on sowing month rather than soil type. Yields and specific weight in Agrovista trials have nevertheless ranged from KWS Extase to exceeding KWS Dawsum. Generally drilling Nov-Jan for best results	
Spec. weight	(79)

Bracket values give guidance on comparative agronomic values based on commercial observations and Agrovista trial performance.

Flexible sowing date

To battle the challenges of late drilling, Alvius has exceptional vigour. Alvius can be drilled from mid-October onwards: it's best performance tends to be later drilling, where other true winter wheats start to struggle. Alvius wheat does not require vernalisation and has good winter hardiness, so emergence and leaf-growth can be rapid from later sowings.

"I drilled 30ha of Alvius for seed and 6.0ha of Belepi for commercial use into a cloddy seedbed 2 February" commented John Taylor, Clopton Suffolk. "There was no apparent difference in emergence between them, though Alvius continued to grow through an initial cold snap, while Belepi was held back a touch" he continued.

October sown wheat emergence - Lamport AgX 2024



Alvius 375 seeds per m²



Skyfall 375 seeds per m²

Breeder trials in harvest 2022 and 2023

Harvest year 2021	Sowing date	Heading date	Harvesting date
WINTER WHEAT	07.10.2020	07.06.2021	06.08.2021
SPRING WHEAT	24.10.2020	13.06.2021	17.08.2021
ALVIUS WHEAT DRILLED AUTUMN	12.11.2020	11.06.2021	06.08.2021
ALVIUS WHEAT DRILLED SPRING	24.03.2020	13.06.2021	06.08.2021

Harvest year 2022	Sowing date	Heading date	Harvesting date
WINTER WHEAT	10.10.2021	24.05.2022	18.08.2022
SPRING WHEAT	23.10.2021	09.06.2022	22.08.2022
ALVIUS WHEAT DRILLED AUTUMN	18.11.2021	30.05.2022	10.08.2022
ALVIUS WHEAT DRILLED SPRING	23.03.2021	09.06.2022	10.08.2022

Speed of development

Breeder trials in harvest 2022 and 2023 highlighted the varieties speed of development not just in establishment but throughout the growing period.

Alvius has been shown to be early to harvest bringing the below benefits:

- HFN maintenance with an early and dry harvest
- Sprouting reduction with an earlier and drier harvest
- An increase in following crop options with an earlier harvest
- A reduction or elimination of drying costs with an earlier harvest

Alvius yield

Over 3 years at our AgX site at Haddenham, Cambridgeshire Alvius has been shown to yield comparably to true winter wheat varieties when sown in November but with a superior specific weight. Sadly there was no data for harvest 2024 given the challenging autumn of 2023 where drilling wasn't possible.

3-year mean November sown (t/ha) - AgX Haddenham following sugar beet

	2021	2022	2023	Yield mean	Specific weight mean
ALVIUS	10.83	13.14	12.09	12.02	76.7
CHAMPION	11.00	14.71	12.89	12.87	70.52
EXTASE	9.85	14.35	11.99	12.06	73.56
DAWSUM	9.94	14.13	11.70	11.92	74.21
SKYFALL	9.54	12.93	11.01	11.16	73.18

Beyond late autumn drilling Alvius can be drilled throughout the spring if required. Within spring drilled trials Alvius continues to perform similarly to true spring wheats whilst retaining its impressive specific weight and clearly shows the versatility of the variety whatever the drilling window.

Drilling flexibility 2 years - treated yield

Trial Location	Suffolk	Hereford	Hereford	Hamps
Sowing Date	24th Feb	9th Apr	Spring	Spring
Harvest Year	Harvest 23		Harvest 24	
ALVIUS	6.922	4.57	6.32	6.94
NISSABA	7.514	5.33	6.41	6.72
BELEPI	7.194	4.1	5.78	6.56
KWS COCHISE	7.962	5.09		
LADUM			6.97	6.63
MULIKA	7.467	4.84	6.52	6.21

SOURCE: Independent trials - Agrovista contracted harvest 2023 and 2024

Canopy cover % rate of establishment. Drilled 26 November

Variety	Seed rate	Plants/m ²	Canopy cover %	Canopy cover %	Canopy cover %	Canopy cover %
		04/02/2021	04/02/2021	17/02/2021	05/03/2021	18/03/2021
ALVIUS	450	219	7.42	8.09	16.23	27.65
KWS CRANIUM	450	183	4.24	5.91	12.24	19.18
MULIKA	450	206	7.52	9.16	15.72	24.62
SKYFALL	450	197	5.16	7.13	16.16	23.44
KWS EXTASE	450	189	6.06	7.72	17.21	26.38
CHAMPION	450	202	6.24	7.93	16.73	28.61

SOURCE: AgX trials Haddenham, harvest 2021

Alvius copes well with later drilling conditions. Establishment and the ability to maximise green leaf area quickly are important factors. Visual assessments by variety at our fenland trial site following sugar beet, drilled 26 November into conditions politely described as 'challenging' illustrate Alvius' capabilities.

Alvius' speed of leaf production in the spring was notable with only Champion catching up with it by mid-March. By harvest both varieties were on par for yield, though the specific weight of Alvius proved notably higher, which is a reoccurring feature with this variety.

“

Alvius continued to grow through an initial cold snap, while Belepi was held back a touch

John Taylor
Clopton Suffolk

mindful

winter wheat

Agrovista
exclusive

Mindful group 4 hard feed was launched in autumn 2023 offering growers an alternative to the later drilling window of its predecessor Sartorial.

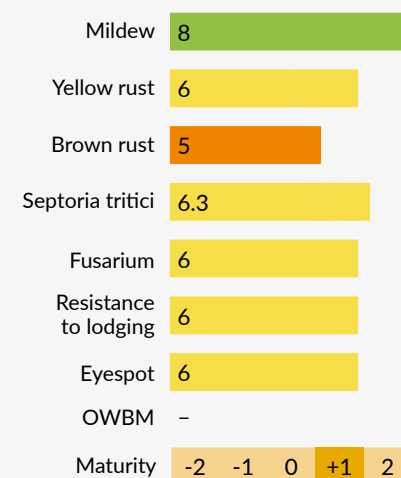
With a very different genetic profile of Evolution x Costello, new variety Mindful brings the drilling window forward into late September allowing growers to spread their workload during that busy period.

Where conditions require, however, Mindful also performs well later drilled which when coupled with its early maturity and high specific weight, ensures yield is not compromised.

Mindful

Group 4 Hard

- Best mildew score of any AHDB RL variety/candidate
- Outyields Dawsum in east and Champion in north
- Good early drilling yields - 105 over two years, third highest overall (including Dawsum/Champion) in 2022
- Compliments Sartorial with earlier drilling window and differing genetics to reduce disease pressure on farm
- Has equivalent specific weight to Dawsum through same Costello parent
- Performs well as a second wheat and on heavy land
- Mindful appears to have inherited from its parent Evolution the latter's good scavenging capability, with competitive yield both early and late-drilled



REGION	YIELD
UK	104
EAST	104
WEST	104
NORTH	(103)
Untreated yield	91
First cereal	104
Second cereal	(104)
Light soils	(101)
Heavy soils	105
Spec. weight	79.3

At its inception in 2023 Mindful's presence in the AHDB 5 year early sown trials where all sites were drilled before the 25th September placed its performance in the top 10 varieties out of 56.

Where drilling is delayed or following first-lift break crops Mindful also offers high yield opportunity. Again, its high specific weight (coming from the Costello parent) helps to maintain good sample quality and consistent yield.

Winter wheat RL early sown trials 3 year (adjusted from 5yr treated)

Name	Type	Mean	% Cont	Count	Angus	NYorks	Nrthum	MLoth	Cambs	Fife	Nrthum	MLoth	NYorks	Cambs
Year					2021	2022	2022	2022	2022	2022	2023	2023	2023	2023
LSD 5%		0.53	4.60		-	0.68	0.87	0.69	0.52	0.67	0.69	0.49	0.37	0.50
Sowing date					22 Sep	18 Sep	13 Sep	13 Sep	11 Sep	10 Sep	13 Sep	15 Sep	13 Sep	09 Sep
Soil type					L-sand	Medium	Medium	Medium	Medium	L-sand	Medium	Medium	Shallow	Medium
MINDFUL	Hard	11.77	103.4	12	10.03	13.12	12.26	12.95	13.08	12.37	13.02	9.76	11.71	12.22
GLEAM (C)	Hard	11.71	102.8	34	10.47	13.12	12.25	12.68	12.84	12.01	13.61	9.72	12.18	12.05
LG SKY-SCRAPER (C)	Soft	11.58	101.7	24	10.38	13.05	11.99	12.45	12.97	10.96	13.47	9.48	12.40	11.89
KWS EXTASE (C)	Hard	11.50	101.0	13	10.06	13.46	-	-	-	-	12.71	9.41	12.68	12.00
KWS BARREL (C)	Soft	11.23	98.6	34	9.63	12.28	11.53	11.69	12.80	10.76	12.56	10.07	11.75	11.04
SKYFALL (C)	Hard	10.92	95.9	34	10.33	12.47	10.84	11.24	12.07	10.55	13.43	8.79	11.33	11.78

(C) = yield control

SOURCE: Part AHDB winter wheat RL Early sown trials 2023 – valid sites, - locations represented to show geographical spread per year. Mindful compared against all controls.

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The most important point for me is Mindful's specific weight. It generally flies through the plant, and we get a really bold good quality sample out the other end

Claire Vergette

Seed Production and Site Manager, Agrovista

3-year yield and specific weight across sowing dates

Variety		MINDFUL		DAWSUM		CHAMPION		SKYSCRAPER	
		Yield (t/ha)	Spec weight	Yield (t/ha)	Spec weight	Yield (t/ha)	Spec weight	Yield (t/ha)	Spec weight
Harvest 24	Oct sown	11.07	75.5	10.79	77.7	10.4	67	10.4	64
	Nov sown	11.51	80	-	-	10.76	77	-	-
	2nd wheat	10.69	67	10.23	72	9.47	67	10.48	64
	Scotland	10.01	-	9.99	-	-	-	9.66	-
Harvest 23	Oct sown	10.52	74	10.87	74	-	-	11.57	72
	Nov sown	10.6	71	10.77	72	-	-	10.92	71
	Scotland	12.78	78	12.94	79	-	-	12.14	77
Harvest 22	Sept sown	14.6	-	14.76	-	15.1	-	14.29	-
	Oct sown	12.37	-	12.75	-	12.48	-	13.26	-
	Nov sown	15.44	-	14.13	-	14.71	-	15.61	-
	2nd wheat	11.4	82	-	-	-	-	11	80
	Scotland	11.5	82	11.5	83	11.9	79	11.02	80

SOURCE: Agrovista AgX trials / Agrovista screening trials / supplementary data trials SAC

Giles Western of G. Western & Partners, Brundish, Suffolk grew Mindful for seed across three different years. Harvest 22 he drilled early, following fallowed land prior to which was late-lifted sugar beet. The crop achieved a respectable 12t/ha.

This compared favourably with KWS Dawsun following early-lifted sugar beet at 11.1 tonnes per hectare. Such was the performance of Mindful that Giles grew the variety a second year with 22 hectares in a second wheat position and a further 35.5 hectares as a first wheat, spread over a range of dates – early drilled following oilseed rape and late drilled after sugar beet.

It's easy to forget when analysing results the growing conditions that the crops endured in any one year.



The performance of Mindful drilled in ideal conditions early season and its resilience to equally perform late-drilled, or in compromised conditions whether in trials or commercially on farm, reflects the flexibility of the variety

Stuart Cree
Seed Technical Manager

Harvest 23 was a case in point following one of the wettest autumns and spring weather patterns. Crops suffered from difficult and later drilling conditions, many subsequently had rooting close to the surface when dry weather finally arrived followed by a wet harvest.

"The Mindful drilled in December achieved just under 10t/ha" commented Giles, pleased on the 23rd August that all was finally in the shed. Of that yield he had 4 metres around the headland that had looked terrible all season drilled during a frost.

The 35ha of first wheat Mindful averaged 9.71t of collected tonnage for use as seed with specific weights ranging from 72 to 78 kg/hl and TGW up to 48gms.

Just north of Giles bordering into Norfolk Simon Pretty, GLA Farms harvested his first crop of Mindful, trying it for the first time to see what it could do. "Due to it being so wet we really mauled it in following late-lifted sugar beet and were pleased to see it achieve 9.84t/ha" said Simon. GLA now have 29 hectares Mindful as a second wheat and a further 50 hectares following sugar beet for seed production harvest 25.

"The performance of Mindful drilled in ideal conditions early season and its resilience to equally perform late-drilled, or in compromised conditions whether in trials or commercially on farm, reflects the flexibility of the variety" concludes Stuart Cree Seed Technical Manager Agrovista. "By incorporating Evolution as a parent, the breeder has widened the variety's sowing window of opportunity, giving growers confidence that Mindful will deliver performance even in difficult conditions".

Disease resistance

Mindful has Evolution as a parent, a Danish variety with a three-way parent cross pedigree. Costello is a second parent from which it gains its high specific weight. Genetic diversity is essential in today's environment with some 70 varieties of winter wheat present in the market from a relatively small number of UK-active breeders. 2024 proved to be a high-disease year for winter wheat and some trial locations had significant pressure from septoria tritici, yellow and unusually brown rust.

At our AgX trial site in Cambridgeshire, drilled on 2nd October on fenland, key feed wheat varieties were put to the test. Mindful performed better than some varieties such as Typhoon which are generally recognised as highly resistant varieties.

This emphasises the importance of spreading risk by growing more than one variety and checking pedigree to diversify parentage.

Yield (t/ha at 15% moisture content) **AgX**

Variety	Type	Untreated t/ha	Treated t/ha	Increase t/ha
MINDFUL	Hard 4	6.04	11.63	+ 5.6
LG REBELLION	Hard 4 candidate	7.30	12.24	+ 4.9
KWS DAWSUM	Hard 4	7.17	11.85	+ 4.7
LG TYPHOON	Hard 4	5.79	11.51	+ 5.7
CHAMPION	Hard 4	6.07	11.33	+ 5.3
LG BEOWULF	Hard 4	5.18	9.70	+ 4.5

SOURCE: AgX trial Cambridgeshire

Specific weight (kg/hl)

Variety	Type	Untreated t/ha	Treated t/ha	Increase t/ha
MINDFUL	Hard 4	63.9	74.57	+10.7
LG REBELLION	Hard 4 candidate	65.2	72.80	+7.6
KWS DAWSUM	Hard 4	68.2	76.87	+8.7
LG TYPHOON	Hard 4	61.4	73.00	+11.6
CHAMPION	Hard 4	58.8	67.10	+8.3

SOURCE: AgX trial Cambridgeshire

We donate 10% of our Mindful seed sales profit to our partner charities

FCN | THE FARMING COMMUNITY NETWORK

"There are many varieties of seed on the market with incredibly imaginative names but "Mindful" encapsulates a caring and understanding approach to our farmers and one that we fully encourage within the agricultural community whether that is being mindful to ourselves or others. It is a commendable step for Agrovista to reinforce the message of awareness by naming a variety of wheat Mindful and with this, raising vital funds for the charity for which we are incredibly grateful."

The Farming Community Network (FCN) is a voluntary organisation and charity that aims to improve the health and wellbeing of people in farming and provide support at times of difficulty and change. In addition to local groups of volunteers, FCN runs a confidential national helpline (03000 111 999, open 7am-11pm every day of the year) and e-helpline (help@fcn.org.uk).

Georgina Lamb
Senior Partnerships Manager at FCN

RSABI

"Our thanks to the Agrovista team for coming up with innovative idea of supporting the farming community through the launch of the Mindful wheat variety," said Carol McLaren, CEO of Scottish agricultural charity, RSABI.

"We are delighted that, along with the Farming Community Network, RSABI will benefit from 10% of the profits of the sale of Mindful seed. However, bigger picture, the initiative has been helping to raise awareness of the importance of mental health in farming and reminds people to look after themselves and look out for others who may be struggling.

The PR and social media coverage which accompanied the launch of Mindful has also helped raise awareness of RSABI's 24/7 Helpline - 0808 1234 555 – and the practical, financial, and emotional support available."

Carol McLaren
Chief Executive at RSABI

Agrovista
exclusive

Sartorial

winter wheat

In its 6th year of commercial availability Sartorial continues to offer growers reliability and consistency. Rapid establishment is its hallmark, best grown as part of a hard feed wheat variety mix which all sensible feed wheat growers employ to reduce risk.

	5 Year treated mean yield					
	2019-2023	2019	2020	2021	2022	2023
SARTORIAL	12.95	13.21	13.07	11.60	13.83	13.03
GLEAM	13.08	13.08	12.37	11.87	14.34	13.73
LG SKYSCRAPER	12.75	12.63	12.36	11.51	14.13	13.14

SOURCE: Independent trials - Agrovista Contracted 2019-2023

Sartorial

- Excellent establishment capability backed by Agrovista in-house trials has made Sartorial a popular variety with Agrovista growers
- High specific weight, decent Septoria tritici and OWBM resistance builds the package this variety offers
- Santiago parentage plus higher spec weight boosts light land performance while rapid, competitive early season development offers later drilling benefits with challenging seedbeds

Mildew	6
Yellow rust	7
Brown rust	5
Septoria tritici	6.2
Fusarium	-
Resistance to lodging	7
Eyespot	-
OWBM	R
Maturity	-2 -1 0 +1 2

Group 4 Hard

REGION	YIELD
UK	NL data (103)
EAST	(103)
WEST	(103)
NORTH	(104)
Untreated yield	(86)
First cereal	(103)
Second cereal	(103)
Light soils	(103)
Heavy soils	(103)
Spec. weight	77.3

Bracket values give guidance on comparative agronomic values based on commercial observations and Agrovista trial performance.

“

Very pleased with establishment and strength of tillers in a very tough year

P J Burke
Kent

Genetic diversity is the key in today's wheat growing environment with so many varieties carrying similar gene resistance and continued blocking of land to maximise spraying area covered in shortest time.

21st century farming in the UK now sees weather patterns shifting to prolonged periods of deluge followed by drought, rather than the maritime weather we have enjoyed in the past.

Consequently, when a weather pattern favours one disease over another, pressure tends to be high, and protection of the crop is a race against time.

Sartorial offers growers a diverse pedigree of parents which exist in only two other varieties, neither commercially grown on a large scale today – Santiago (also found in RGT Bairstow and LG Skyscraper) while Cachel and KWS Bonham are not found anywhere in the current Recommended List of varieties.

Parentage which is rarely shared with other existing varieties reduces the risk of a sizeable shift in disease resistance over a short period.

This is illustrated in Sartorial's resistance score for yellow rust. Santiago's resistance score increased as the variety neared the end of its commercial presence in the market, while the majority tend to worsen as pressure builds reflective of increased market share. Sartorial's resistance has overall remained static.

Disease resistance

"I don't think I have ever seen any yellow rust on Sartorial that has worried me" reported David Blance National Trials Manager Agrovista.



Sartorial direct drilled autumn 21 after Spr linseed, heavy clay land Leicestershire



Sartorial right, Skyfall left drilled same day late-autumn

Sartorial has always carried a small level of yellow rust as a seedling, but at adult growth stage this has never amounted to anything significant. Situations do of course change, and it is important to remain vigilant.

Sartorial has moderate resistance to brown rust and septoria, which would be rated at a 5 and 6 respectively.

Early vigour

Sartorial is recognised throughout the Agrovista agronomy team for its rapid establishment and strong autumn vigour. Repeatedly across varying soil types and drilling situations it can build leaf cover rapidly relative to other higher-profile varieties, including hybrids.

Variety	% Establishment				Mean establishment %
Group 4 (Hard)	Framlingham Suffolk	Balne Yorks	Draughton Leics	Kelso Scottish Borders	
SARTORIAL	64	69.4	89.4	88.3	77.8
HYCLICK (Hybrid)	66	60.8	91.3		72.7
COSTELLO	55.8	64.4	75.5		65.2
GRAHAM	58.3	60.6	70	70.4	64.8
GLEAM	56.5	50.5	70.8	66.3	61

SOURCE: AgX trials autumn 2018

AgX Balne 2020 harvest

Drilled: 30 October @ 375 seeds/m² Balne, Doncaster % Crop establishment on 4 December

AgX

Variety	Type	Seed treatment	% crop establishment
SARTORIAL	Group 4	Redigo Pro	23.2
CRUSOE	Group 1	Redigo Pro GPA	12.7
KWS ZYATT	Group 1	Redigo Pro	13.3
SKYFALL	Group 1	Redigo Pro	14.2
KWS EXTASE	Group 2	Redigo Pro	7.6
LG SKYSCRAPER	Group 4	Redigo Pro GPA	10.7
COSTELLO	Group 4	-	5.4
GLEAM	Group 4	Vibrance	10.1
GRAHAM	Group 4	Vibrance	6.0
SY INSITOR	Group 4	Vibrance	7.3



“

I find Sartorial an ideal choice to follow maize. Direct drilled at 200kgs/ha (425seeds/m²) mid-October into clay loam gives growers reassuring rapid emergence

Rob Purvis

Agrovista Agronomist, South East

Agrovista
semi-exclusive

RGT Guardsman

winter wheat

As a technically driven business Agrovista constantly monitors new advances in crop management undertaking trials to assess new products, or preferably to work with the developers to understand more fully how best to apply the technology to gain maximum grower benefit.

The trait developed by RAGT of wheat varieties resistant to Barley Yellow Dwarf Virus has captured the interest of the early-drilling wheat market as it greatly simplifies crop management and delivers targeted control, removing the need to monitor aphid

populations and leaving time for other key farm activities during the busy autumn period.

Initial varieties carrying the novel trait were notably lower yielding in the absence of the virus which limited their appeal to outlying land only where growers would struggle to effectively manage crops to control aphids, or regions where early aphids were repeatedly problematic. More recently the Sustainable Farming Incentive has boosted grower interest with the £45/ha payment for growers who elect not to use insecticides across their holding but yield relative to conventional varieties has still been lacking.

RGT Guardsman is the first winter wheat variety with BYDV resistance that has **no yield penalty** allowing growers to incorporate it into their rotations without any concerns to yield shortfall.

RGT Guardsman

Group 4 Hard

- RGT Guardsman is a candidate for the RL and is the first BYDV tolerant variety that has a consistent yield equal to current conventional feed varieties. This eradicates the margin risk associated with previous BYDV lines
- Independent VL1 trials in the absence of BYDV register RGT Guardsman matching yields of Glem and outperforming LG Skyscraper
- Where BYDV has been present RGT Guardsman is the highest yielding of all Genserus lines
- Early indications are that it has a generally good profile of disease resistance, a high untreated yield and early maturity.
- Based on limited data the use of a PGR would be beneficial

Mildew	(6)
Yellow rust	(8)
Brown rust	(6)
Septoria tritici	(6)
Fusarium	-
Resistance to lodging	(5)
Eyespot	(5)
OWBM	-
Maturity	-2 -1 (0) 1 2

REGION	YIELD
UK	(103)
EAST	(104)
WEST	(100)
NORTH	(104)
Untreated yield	(79)
First cereal	-
Second cereal	-
Light soils	-
Heavy soils	-
Spec. weight	(75.5)

A high yielding hard feed variety, RGT Guardsman in the absence of BYDV has yielded in line with control varieties Gleam and Extase and out-performed LG Skyscraper in official VL trials over the last two years (LSD 0.35t/ha). As a candidate for the AHDB UK Recommended List 2025, RGT Guardsman brings growers the opportunity to drill early without yield penalty or the need to apply aphicides. Table 1.

BYDV resistance

It is a common occurrence within RGT Guardsman for some yellowing of the leaves to occur in the presence of infected aphids. The mechanism to resist the virus cannot be implemented without the aphid penetrating the surface of the leaf and transferring the virus into the plant.

This is different to a mechanical resistance as seen in wheat plants such as those resistant to wheat blossom midge, where the latter is prevented from accessing

the plant entirely. RGT Guardsman resists the virus invasion such that there is less virus present in the plant by harvest than there was initially. As such some yellowing will be seen. A merely tolerant plant would manage to survive through to harvest but the viral load would not diminish, and yield would be compromised.

Agronomics

RGT Guardsman has a development growth rate similar to LG Typhoon and a prostrate growth habit, making it an ideal choice for mid-September drilling- the period when BYDV risk is at its greatest, coupled with high tillering capacity and a faster development to harvest unlike previous BYDV lines, safeguarding harvest quality and enabling more timely cultivations beyond.

The variety is relatively tall, but marginally shorter than LG Skyscraper. Nevertheless a well timed plant growth regulator programme would be recommended. Table 2

Winter wheat VL 2-Year 2023-24 Treated grain yield (t/ha) - 2 year REML model 2

Variety		Mean (t/ha)	% Control	Number of tials	2023	2024
Trial mean		11.77	11.4			
LSD 5%		0.35	3.1			
CV%		3.6				
RGT GUARDSMAN		11.7	102.6	26	11.71	11.68
SKYFALL	Control	11.14	97.7	30	11.19	11.09
GLEAM	Control	11.76	103.2	30	11.76	11.77
LG SKYSCRAPER	Control	11.32	99.3	29	11.4	11.25
KWS EXTASE	Control	11.95	104.9	30	11.91	12
LG ASTRONOMER	Control	10.82	94.9	29	10.79	10.86

Table 1

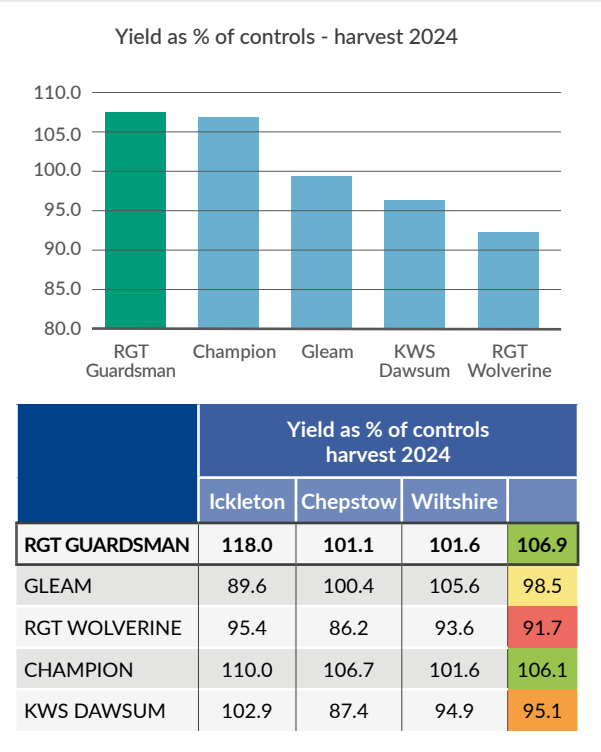
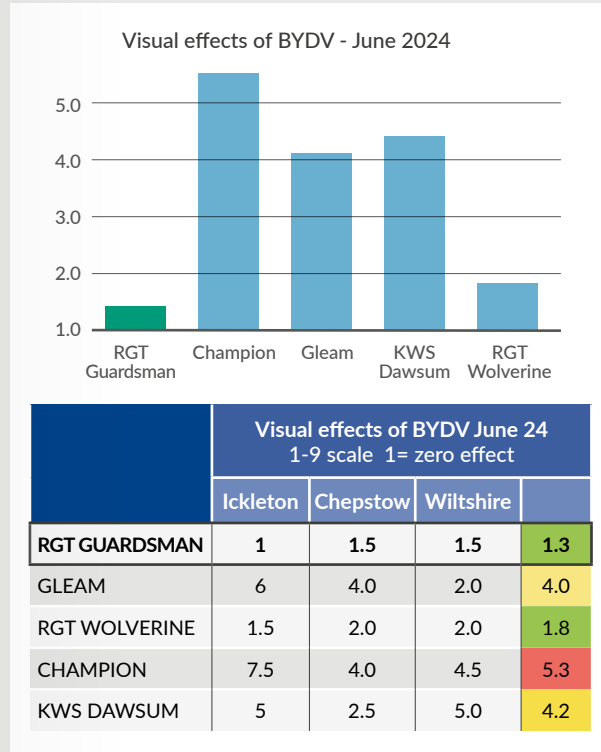
Control varieties	Yield treated (T) - UK	Yield treated (T) - East	Yield treated (T) - West	Yield treated (T) - North	Yield untreated (UT) (as % treated controls)	Mildew (1-9)	Yellow rust (1-9)	Brown rust (1-9)	Septoria tritici (1-9)	Eyespot (1-9)	OWBM	BYDV	Lodging % (T)	Straw length (cm) (UT)	Ripening (days +/- Skyfall)	Specific weight (kg/hl)
Mean of controls (t/ha)	11.4	11.2	11.5	12.0	11.4	-	-	-	-	-			-			
LSD 5%	3.1	2.5	3.6	7.1	6.0	-	-	-	-	-			-			
RGT GUARDSMAN	103	104	[100]	[[104]]	79	6	8	6	6	5	-	R	3	90	0	75.6
GLEAM	103	102	[104]	[[105]]	71	6	5	6	6	5	R	-	0	85	0	77.3
LG SKYSCRAPER	99	100	[99]	[[99]]	74	7	7	5	5	5	R	-	1	92	+1	77.0

Table 2. SOURCE: VL1 and 2 BSPB data harvest 2023 - 2024 (Also available on AHDB Candidate Table 2025)

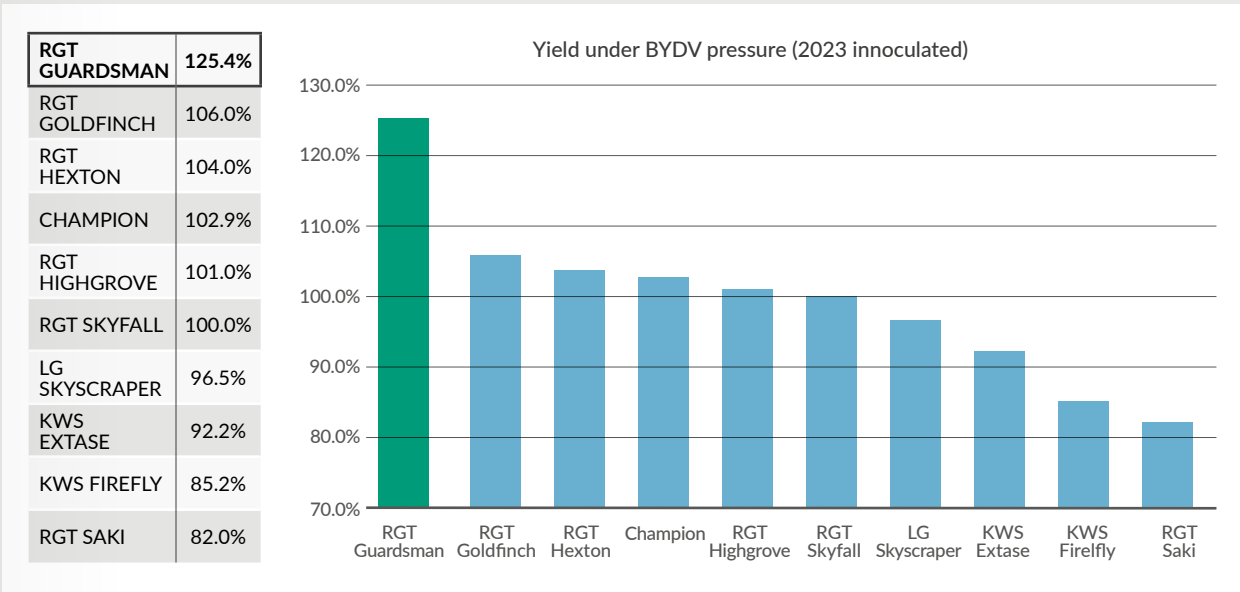
BYDV breeder trial results 2024

The breeder RAGT undertook BYDV trials in 2024 assessing both natural and artificially infected results across three locations; Ickleton, (south of Cambridge); Chepstow (Gloucs) were both inoculated. The site in Wiltshire was not inoculated, relying on natural aphid numbers. It proved to be a generally low pressure

situation across all three sites, though there was evidence of the virus being present with some redening of the flag leaf and a degree of stunting. Of the varieties trialled the worst effected was Champion but visual evidence was not severe, rating only 5 on the 1-9 scale.



However, even a moderate level of infection present within a non-resistant high yielding feed variety was sufficient to narrow the yield difference between them and RGT Guardsman. This highlights that realistically RGT Guardsman removes the risk previously associated with this new wheat trait of BYDV resistance and offers the UK farmer a genuine new benefit in pest resistance without compromise* Where BYDV is present, then performance of RGT Guardsman is second to none as displayed in the following table:



One to watch

Treble 4

British bred for the challenges of maritime-climate farming

At Agrovista we are very conscious of the need to adapt to change. The use of innovative products to counter changeable weather patterns through our 'Discovery' range and the development of novel biological combinations via our 'Innovation' range to aid plant nutrition, growth and soil health are just two examples.

In cereal variety progression there is a need to broaden the narrow gene pool that exists within UK wheat varieties currently being grown. Over-reliance by UK breeders of the wheat variety Cougar as a parent, was the principal cause of the rapid resistance

breakdown to the yield-robbing disease *septoria tritici* four years ago. We are now seeing a similar situation with a number of wheat varieties all carrying the same yellow rust resistance gene (thought to be Yr15) with consequential variety 'breakdowns'.

Treble 4 (VL data)

Group 4 Hard

- A high yielding hard feed winter wheat with a robust disease resistance profile and stiff straw
- Treble 4 has a similar growth habit to KWS Palladium suggesting a mainstream drilling window as well as good second wheat opportunity through genetically strong VPM eyespot resistance
- Septoria resistance is also good favouring growers in the wetter regions of the UK
- Grain quality is above average for a feed type with good specific weight, high hagerberg and above average protein
- In official trials Treble 4 was notably stiffer than control varieties Barrel and Skyfall

Mildew	(5)
Yellow rust	(7)
Brown rust	(5)
Septoria tritici	(7)
Fusarium	-
Resistance to lodging	(8)
Eyespot	6@
OWBM	-
Maturity	-1 0 1 2 (+3)

REGION	YIELD
UK	(104)
EAST	(105)
WEST	(104)
NORTH	(99)
Untreated yield	(84)
First cereal	-
Second cereal	-
Light soils	-
Heavy soils	-
Spec. weight	(78.4)

We believe in Sustainable Intensification. The reality is that plant breeders can only do so much to challenge disease and other agronomic pressures and without agrochemicals we would be looking at 20-35% lower yields, with poorer grain quality and increased levels of mycotoxins

Bill Angus
F1 Seed Ltd

“



Treble 4 is a new high-yielding feed variety from a UK family-owned breeding operation F1 Seed Ltd. They believe in genetic diversity and have a pipeline of new varieties of which Treble 4 is one of the first to reach market.

“We provide genetic solutions which are aligned with the technical advances that have given UK growers the means to produce high yields, sustaining lower consumer prices, but also helping to feed a world short of food” comments Bill Angus, F1 Seeds owner and wheat breeder.

“We believe in *Sustainable Intensification*. The reality is that plant breeders can only do so much to challenge disease and other agronomic pressures and without agrochemicals we would be looking at 20-35% lower yields, with poorer grain quality and increased levels of mycotoxins” Bill explains.

F1 Seed Ltd are committed to optimising the use of different genetic parents, which means also helping growers to understand how best to grow their varieties. *Agronomising Genetics™* is a phrase at the centre of F1 Seed's approach to bringing genetically diverse varieties to market.

Rather than reducing a variety to numeric ratings and averaged yield indicators as prescribed by the Recommended List protocol, F1 Seed are working

with Agrovista to engage more closely with growers to achieve maximum performance across a range of agronomic inputs, stretching the variety to check its resilience. Such work will help to determine how best to target inputs to gain maximum yield and quality benefits.

Treble 4 combines high yield potential with a robust disease package and very stiff straw.

Treble 4 yield as % controls treated/untreated

	Untreated	Treated
TREBLE 4	121	106
LG SKYSCRAPER	113	100
SKYFALL	61	96
KWS BARRELL	106	97
GLEAM	104	106
KWS EXTASE	118	103
Trial number	1	9

SOURCE: F1 Seed Ltd private trials 2021-2023



Draughton variety trial AgX					
Drilling date: 18 October 2024			14.11.24	18.12.24	22.01.25
Variety	Plants/m ²	% emergence	% ground cover	% ground cover	% ground cover
TREBLE 4	172.7	46.0	4.52	8.82	11.89
DAWSUM	200.6	53.5	2.81	9.81	10.83
PALLADIUM	187.0	49.9	7	7.87	13.02

Late drilled varieties, Haddenham AgX					
Drilling date: 11 November 2024			17.12.24	30.1.25	17.2.25
Variety	Plants/m ²	% emergence	% ground cover	% ground cover	% ground cover
TREBLE 4	368.9	82.0	7.33	15.16	19.58
DAWSUM	359.6	79.9	6.99	13.46	17.13
PALLADIUM	355.9	79.1	7.39	14.88	19.3

Treble 4 has a prostrate growth habit with similar % ground cover as KWS Palladium.
SOURCE: AgX trials harvest 2025

Agronomic type and place in rotation

Treble 4 is a medium developing variety and as such that drilling as a first wheat late-September would be a suitable position. It has a semi prostrate growth habit. Varieties with similar slow development would be KWS Palladium by example.

Development then quickens towards spring when its growth rate is more akin to KWS Extase. This has been shown in independent trials to be beneficial in competing with blackgrass.

Balne variety strips AgX		
Drilling date 4 October 2024	03.02.25	05.03.25
Variety	% ground cover	% ground cover
TREBLE 4	33.29	59.63
KWS EXTASE	34.88	60.57

SOURCE: AgX trials harvest 2025

Limited data indicate that Treble 4 may play a role in second wheat situations where its VPM resistance will reduce levels of eyespot infection. This resistance, which is relatively rare in current wheat varieties is very powerful in reducing eyespot infection. Derived from *Aegilops ventricosa* there has to date been no erosion of its effectiveness.

Treble 4 has medium length straw - shorter than both LG Skyscraper and KWS Extase but just slightly taller than Gleam. In untreated Official trials (the best measure of straw strength) Treble 4 recorded 1% lodging over 10 scores compared to 14% for

Skyscraper, Gleam and Extase and 5% for KWS Barrel and Skyfall (these five varieties being the control varieties). In F1 Seed Ltd private trials Treble 4 recorded 3% lodging in treated trials compared to LG Skyscraper (20%), Gleam (20%) and 5% for KWS Extase.

Disease resistance

Disease resistance has assumed a very high level of priority following the withdrawal of key fungicide products and currently new races evolving to overcome current resistances being deployed by wheat breeders across the UK. This had relevance in 2024 where some established varieties showed higher levels of disease than seen previously with newer varieties also challenged by new populations of septoria and races of yellow rust.

To date Treble 4 has shown good resistance in both official trials and private trials to the major fungal diseases. The septoria resistance is believed to come from optimising minor genes rather than major genes.

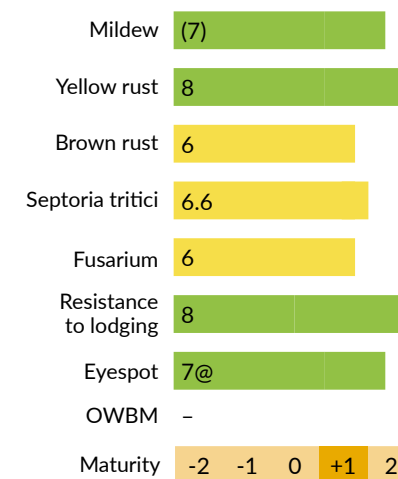
"The resistances being deployed in Treble 4 are different to many of the mainstream varieties - giving growers a choice in varietal diversity with consequential reduced risk" commented Bill, "Treble 4 has an unusual combination of good disease resistance and high treated yields" he concluded.

Grain quality

Treble 4 is a hard milling feed wheat. To date specific weights are similar to other hard feed wheats such as Graham or Gleam. Hagberg falling numbers are high and protein content about 0.5% above average for hard feed wheats.

KWS Vibe

- New Group 1 milling variety from KWS with consistent good milling quality through 3 years of trials
- Treated yield marginally better than Skyfall and marginally lower than KWS Zyatt, but with significantly improved YR resistance
- Untreated yield 25% higher than Skyfall 17% higher than KWS Zyatt. Likewise improvements over SY Cheer; 7% higher yielding untreated
- KWS Vibe has the highest protein of any Group 1 on the RL, and an above average hagberg and specific weight
- A promising new variety for UK millers



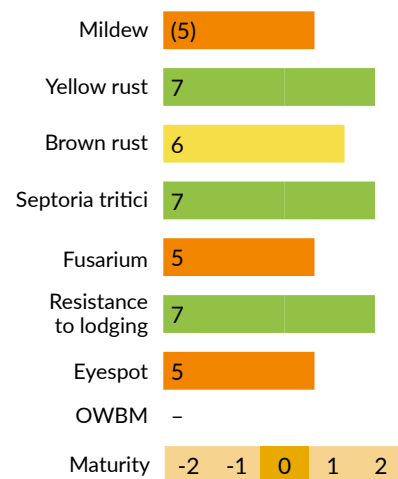
Group 1

REGION	YIELD
UK	98
EAST	97
WEST	100
NORTH	(99)
Untreated yield	89
First cereal	98
Second cereal	97
Light soils	(98)
Heavy soils	98
Spec. weight	79.1

KWS Arnie

Group 2

- New Group 2 milling wheat offering 4% yield advantage over KWS Extase UK and 6% improvement in the west
- Favourable disease resistance achieves a reasonably high untreated yield
- Shorter straw length and better standing without PGR than KWS Extase
- A fast developer in the autumn with the ability to tiller strongly
- Relatively early to mature, high specific weight

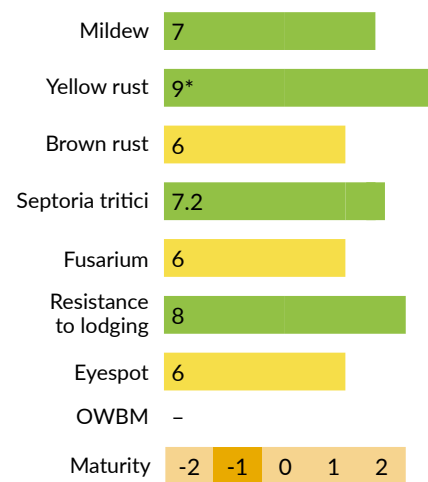


REGION	YIELD
UK	106
EAST	106
WEST	108
NORTH	(103)
Untreated yield	87
First cereal	106
Second cereal	105
Light soils	(103)
Heavy soils	107
Spec. weight	79.1

KWS Palladium

Group 2

- KWS Palladium has a strong grower following due to early drilling suitability, supported by excellent yellow rust resistance - autumn and spring; good mildew and matching septoria tritici resistance, and stiff, short straw
- Yield and early maturity are on par with KWS Extase
- KWS Palladium offers the highest milling hagberg for UK grists of any Group 1,2 or 3 RL variety, coupled with good sprouting resistance
- NOT ukp export milling.



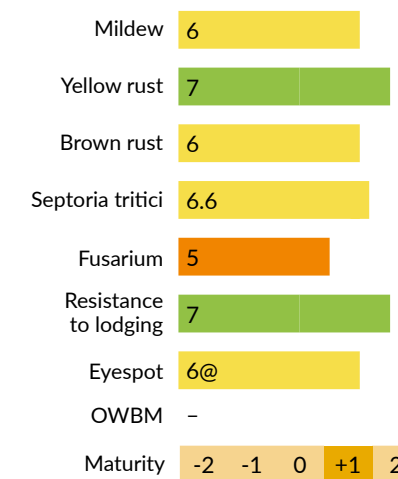
REGION	YIELD
UK	101
EAST	100
WEST	103
NORTH	101
Untreated yield	89
First cereal	101
Second cereal	100
Light soils	100
Heavy soils	101
Spec. weight	77.7

* April 25 – heightened levels of YR affecting these varieties potentially compromising seedling resistance. Uncertain situation at time of going to press

Bamford

Group 3

- Consistently high yielding Group 3 biscuit variety with no weaknesses
- Robust disease resistance and better standing than newcomers
- Diverse end-market opportunity - biscuit, distilling, provisional export soft, with highest specific weight grain Group 3 sector
- Not OWBM resistant
- Expect continued high seed demand autumn 25

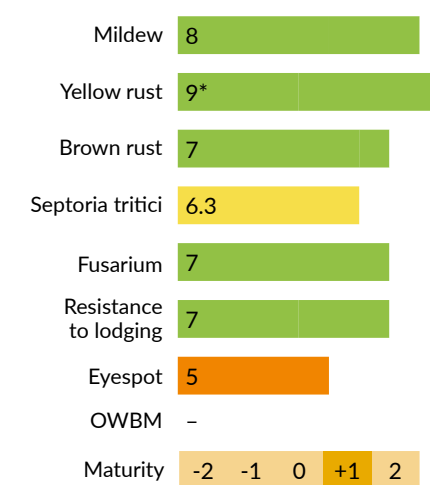


REGION	YIELD
UK	106
EAST	106
WEST	107
NORTH	107
Untreated yield	90
First cereal	106
Second cereal	106
Light soils	106
Heavy soils	106
Spec. weight	78.7

KWS Dawsum

Group 4 Hard

- KWS Dawsum offers high Group 4 hard endosperm yield with excellent specific weight and an enviably-good untreated yield for a feed type
- Costello parentage ensures excellent mildew and heightened yellow rust resistance yet Dawsum also has high brown rust resistance too - a resistance combination unique to this variety
- High yield when sown early
- Slow growth rate suggests Sartorial or Mindful would be better varieties for later sowing positions
- Good sprouting resistance.

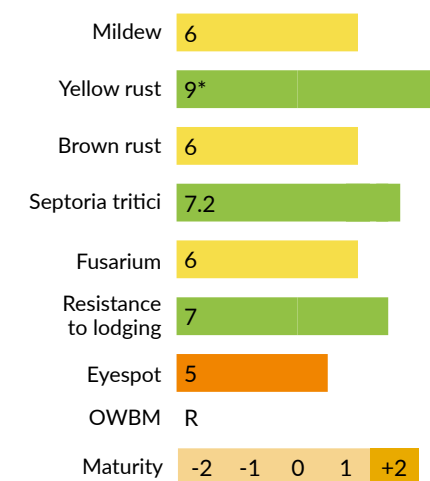


REGION	YIELD
UK	103
EAST	103
WEST	103
NORTH	106
Untreated yield	89
First cereal	103
Second cereal	103
Light soils	105
Heavy soils	103
Spec. weight	79.9

LG Typhoon

Group 4 Hard

- LG Typhoon develops notably slowly when drilled early, has a moderate response to PGR and has no disease resistance weaknesses, with an equally high untreated yield on par with KWS Dawsum
- LG Typhoon is suited to early drilling, stands well and has OWBM resistance
- Performed well in 2023/4 season
- Useful variety for anyone following a regen management strategy



REGION	YIELD
UK	101
EAST	101
WEST	101
NORTH	103
Untreated yield	87
First cereal	101
Second cereal	102
Light soils	101
Heavy soils	100
Spec. weight	77.1

* April 25 – heightened levels of YR affecting these varieties potentially compromising seedling resistance. Uncertain situation at time of going to press



Barley varieties

Agrovista
exclusive

Resolute

winter barley

Consistency and reliability are paramount to successful cropping in any species and so rarely do we find a variety which performs to these principles in all regions of the UK and across all soil types. Resolute is one of those uncommon varieties which does precisely that.

Resolute winter barley is a high yielding two-row feed barley with an excellent agronomic and quality package including a spectacular range of disease resistances, superb standing ability and a robust specific weight with low screenings.

Whilst Resolute and KWS Tardis have similar specific weight scores, Resolute has superior grain retention as demonstrated in the table above. This underscores the variety’s exceptional grain quality.



BARLEY VARIETIES

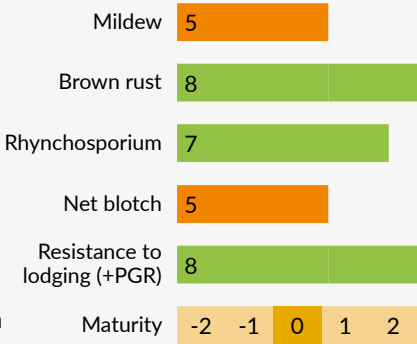
	Yield (100% = 9.76t/ha)		Grain quality		
	Treated LSD (5%) 2.6	Untreated LSD (5%) 5.2	Specified weight LSD (5%) 1.8	Screenings through 2.25	Screenings through 2.5
RESOLUTE	104	108	69.2	1.4	4.7
KWS TARDIS	103	103	69.2	1.6	5.9

SOURCE: AHDB 2023 published harvest data 2019-23 on 7 August 23

Resolute - 2 Row

Data drawn from AHDB RL 5-Year Report 2020 - 2024
REML Model 3 and 2025/26 AHDB winter barley RL

- Limited data suggests outperforms LG Caravelle and KWS Tardis on light soils and KWS Tardis in the east
- Good untreated yield helped by excellent brown rust and ryhchosporium resistance combination
- No other variety commercially available (other than our own exclusive variety Aleksandra) has such a robust combination of scores for these two diseases
- Good standing on par with KWS Tardis
- Excellent quality sample to maximise market eligibility for UK and export feed markets



REGION	YIELD
UK	104
EAST	105
WEST	(101)
NORTH	103
Untreated yield	91
Light soils	(105)
Heavy soils	(106)
Spec. weight	69.3

Bracketed data highlights a low number of trials in dataset and cannot be presumed accurate.



Resolute now in its third commercial year continues to impress on farms nationally even in high disease pressure situations with a very high untreated yield performance in AHDB winter barley trials.

RESOLUTE's untreated yield performance is supported by a good combination of disease ratings with no weaknesses, undoubtedly helping it to perform consistently across regions and seasons.

Winter barley disease resistance

	Mildew	Brown rust	Rhynchosporium	Net blotch	ByMV
RESOLUTE	6	8	7	5	R
LG MOUNTAIN	5	7	5	5	R
SY KINGSBARN	7	5	6	5	R

SOURCE: Candidate table 2023 winter barley

Winter barley RL 5-year report 2019-23

Variety	Mean	% Control	2019	2020	2021	2022	2023
Trial mean	8.32	8.03	8.25	8.28	8.31	8.32	8.35
LSD 5%	0.42	5.20					
RESOLUTE	8.66	107.9	-	-	8.51	8.78	8.71
SY KINGSBARN (C)	8.10	100.9	8.24	8.10	8.10	7.92	8.15
KWS TARDIS (C)	8.28	103.2	8.13	8.28	8.47	8.20	8.35

SOURCE: AHDB winter barley 5-year report 2019-23 untreated yield

Resolute has very good rhynchosporium resistance – one of the best varieties overall in a season where disease management proved challenging. As with the need for genetic diversity in resistances for yellow rust and tritici in wheat, so the same applies for rhynchosporium in barley. Resolute brings new parentage to the UK market from European origin.

Despite Resolute's robust disease resistance it is important NOT to reduce fungicide use as a comprehensive programme also improves straw health which brings added benefits, not least late season mitigation of brackling. In trials T2 applications of products such as Jaunt have notably reduced brackling compared to untreated, while boosting grain yield at the same time.

Competitor varieties such as KWS Tardis are recognised for their performance on heavy soils coupled with proven standing ability. Resolute is one of the few varieties which matches KWS Tardis's exceptional standing power but brings better disease resistance coupled with higher yield.

Often straw value alongside yield is an essential element of the feed barley crop. While straw length is marginally longer untreated, Resolute is nevertheless very responsive to PGR and treated Resolute offers a similar crop height and subsequent straw yield compared to its two row rivals with an exceptional lodging resistance.

AHDB winter barley lodging and straw height

	% Lodged (+PGR)	% Lodged (- PGR)	% Brackling (treated)	Straw Height cms. (-F)
RESOLUTE	(2)	(2)	11	(90)
LG MOUNTAIN	3	(3)	22	(87)
SY KINGSBARN	11	(10)	11	(109)

SOURCE: AHDB Candidate table 2023 winter barley

Resolute's growth habit is of interest and whilst it carries the same rating for maturity as KWS Tardis, experience on farm is that Resolute is marginally earlier.

Spring vigour

Part of the reasoning for its earlier harvest may come from Resolute's excellent spring vigour. Growers of Resolute often remark on its rate of growth in early spring, how it rapidly draws nutrition, colours and builds leaf area. Resolute's early vigour has been noted across the UK from farmers, agronomists and seed growers alike. "Resolute has definitely got early vigour in the spring" remarked our third time Resolute seed grower Ed Farquharson.

Anthony Wade Agrovista's western technical manager commented 'Following two very wet winters and a dry spring Resolute has managed the conditions well and looks superb heading into harvest

These observations have been noted by many neighbouring farmers asking after the variety as its state of development out-paces others locally.



“

Following two very wet winters and a dry spring Resolute has managed the conditions well and looks superb heading into harvest

Anthony Wade
Agrovista's western technical manager

Northern performance

There has been strong uptake from customers in the North. While there is no comprehensive assessment of the variety within Scotland individual trials nevertheless help to develop a picture of robust performance. Scottish Agronomy results by example in 2023 for Glenrothes where the variety ranked third (beaten only by hybrids SY Loona and Nephin) and first untreated at Ellon.

In the treated trials of that year Resolute came fourth and eleventh in the same locations. In private trials in the same year Resolute outyielded controls

SY Kingsbarn, Bolton and Tardis in treated trials at Carnoustie, Angus. Finally, our Scottish seed crop harvest 24 achieved a yield of 10.4 tonnes per hectare off 12.1 hectares with a high specific weight and TSW.

Scottish winter barley yield results

Resolute is a multi-use variety. For the arable farmer it offers high grain yield for growers wanting a PGR-responsive early-harvesting break entry where maximum yield is priority. For livestock farmers on fertile soils Resolute offers a low maintenance variety, stiff-strawed, lower disease susceptibility with decent straw length.

Aleksandra

winter barley

Agrovista
exclusive

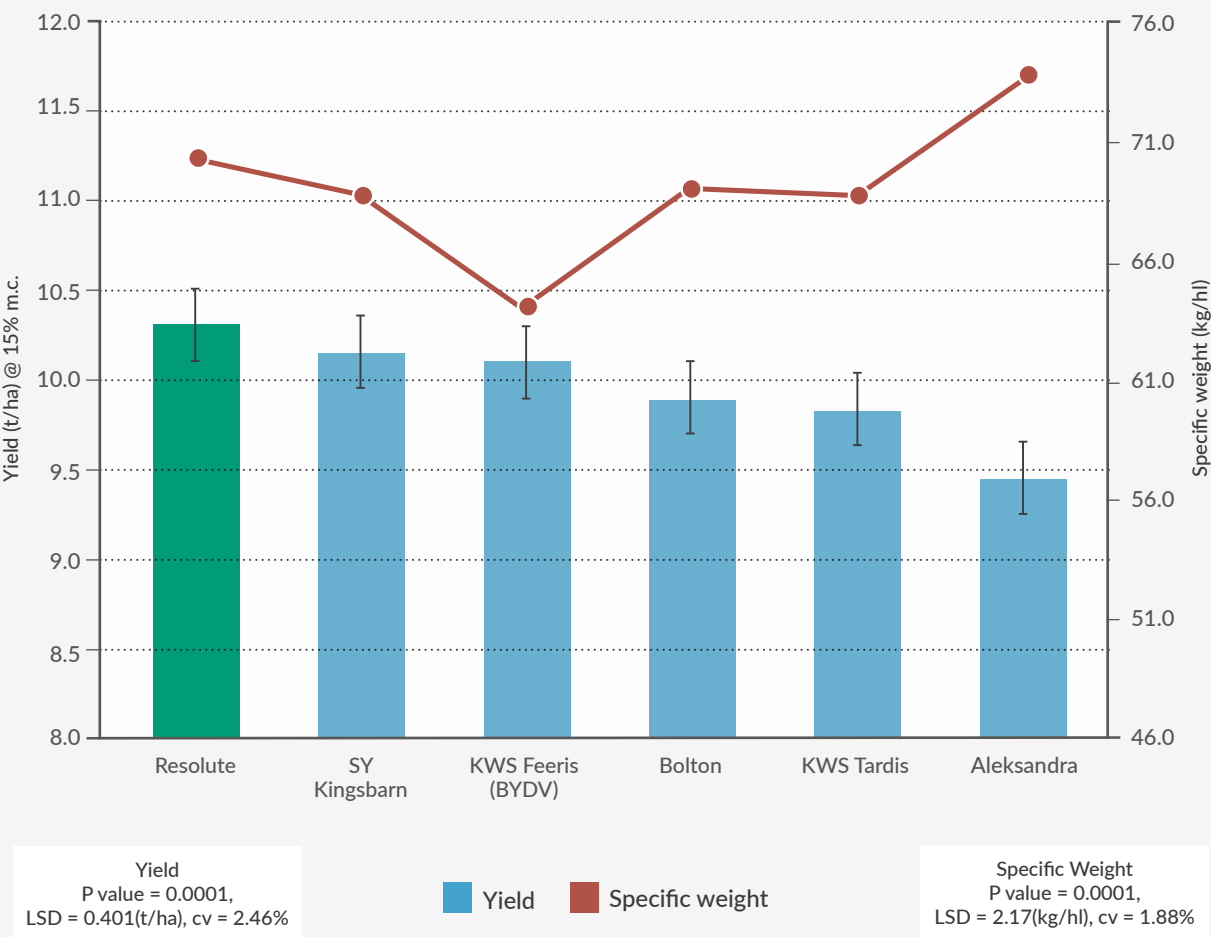
Aleksandra is a specialist feed variety designed for livestock farmers who require an easy management, contractor-friendly crop, a bold sample for rolling on-farm use and loads of clean straw for bedding and adding fibre to the feed mix.

If growers are looking to simply maximise grain yield and barn-filling tonnage then there are numerous varieties such as RESOLUTE and 6-row hybrids that will cover that requirement.

Aleksandra has the best untreated yield of any 2-row winter barley thus far nationally trialled within the UK in recent history, with one of the highest specific weight values ever recorded. It is moderately taller than most winter 2-row feed types giving straw yields any livestock farmer would be delighted with.



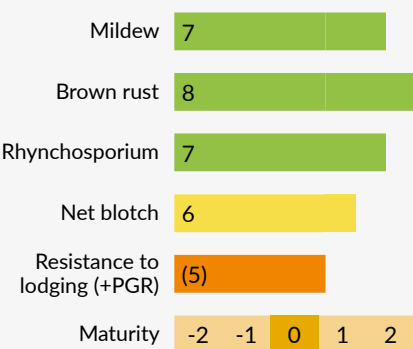
Resolute - Yield and specific weight - Treated - Carnoustie Angus harvest 2023



Aleksandra - 2 Row

Data drawn from AHDB RL 5-Year Report 2020 - 2024
REML Model 3 and 2025/26 AHDB winter barley RL

- Aleksandra is a two-row feed barley with **exceptional** disease resistance and the highest untreated yield and specific weight of **any** variety of its time in official trials
- Untreated yield highest of any variety three years running
- Medium to long strawed perfectly suited to livestock farmers - easy to manage feed variety with max straw yield
- PGR recommended



REGION	YIELD
UK	(101)
EAST	(102)
WEST	(101)
NORTH	(99)
Untreated yield	(97)
Light soils	(100)
Heavy soils	(101)
Spec. weight	72.2

Bracketed data highlights a low number of trials in dataset and cannot be presumed accurate.

"Last year's crop [of Aleksandra] yielded just short of 8t/ha with a specific weight of 67kg/hl at 13% moisture. Screening losses were very low and straw yield extraordinary" Robert Vines, Marlborough, Wiltshire.

Aleksandra's straw is taller than most 2-row varieties, but not as tall as 6-rows. A three PGR programme would be recommended for highly fertile soils or earlier drilled land. It is important to understand that when varieties are trialled within the AHDB Recommended List plot management protocol, trial operators are tasked with making varieties lodge – they have specific trials for this purpose.

Such trials are not assessed for yield or disease levels. The back cropping and soil type locations are selected with the sole purpose of promoting stem lodging or brackling. Nitrogen quantities are increased and timings adjusted accordingly.

"While this helps to differentiate between varieties in trial it also unnecessarily deprives UK growers of significantly beneficial new varieties which managed correctly on suitable soil can offer key managerial and time-saving benefits" Stuart Cree, Seed Technical Manager.

Winter barley trials harvest 2023

Control varieties	Yield treated (T) - UK	Yield treated (T) - East	Yield treated (T) - West	Yield treated (T) - North	Yield untreated (UT) (% treated controls)	Lodging % (UT)	Brackling % (T)	Straw length (cm) (UT)	Ripening (days +/- KWS Orwell)	Specific weight (kg/hl)	Mildew (1-9)	Brown rust (1-9)	Rhynchosporium (1-9)	Net blotch (1-9)	BayMV	Variety type
Mean of controls (t/ha)	9.7	9.1	9.4	11.2	9.7	-	-	-	289	-	-	-	-	-	-	
LSD 5%	3.4	5.0	5.4	4.1	5.3	4.9	0.7	8.4	1.0	0.8	-	-	-	-	-	
ALEKSANDRA	103	(105)	(100)	(101)	(99)	(12)	11	(102)	0	73.3	7	8	7	5	R	Two-row
CRAFT	93	93	93	94	81	(1)	8	(94)	0	71.3	6	7	6	5	R	Two-row
FUNKY	103	103	102	104	88	(4)	14	(94)	0	70.3	5	7	6	5	R	Six-row
ELECTRUM	96	96	97	96	82	(4)	6	(94)	-1	71.5	6	7	5	5	R	Two-row
SY KINGSBARN	107	107	107	107	83	(10)	11	(109)	0	71.6	7	5	6	5	R	Six-row hybrid
LG MOUNTAIN	100	100	101	99	84	(3)	22	(87)	0	71.9	5	7	5	5	R	Two-row

SOURCE: AHDB RL candidates harvest 2023



Last year's crop [of Aleksandra] yielded just short of 8t/ha with a specific weight of 67kg/hl at 13% moisture. Screening losses were very low and straw yield extraordinary.

Robert Vines
Marlborough, Wiltshire



It's vigour alone speaks volumes; as well as producing robust plants that could be very useful for shading blackgrass out.

Colin Chappell
Lincolnshire

"Many livestock farmers use contractors to spray their crops at peak work-load periods. With changeable weather patterns and resources stretched, having a variety which can resist yield-robbing disease longer than all others will prove financially beneficial" concluded Stuart.

Aleksandra has an 8 for brown rust resistance and 7 for rhynchosporium and the highest untreated yield while in official trials. Its treated yield was equally robust matching control varieties and out-yielding KWS Tardis in private trialling 2 years running. In the wetter west of the UK where crops are severely tested with adverse weather, Aleksandra has shown its true potential.



"I used the usual seed rate of about 200kg/ha," says Colin. "In hindsight, that might have been too much – the Aleksandra went into a pretty fertile situation and the seed was the biggest I've ever seen and full of vigour. But, having lost crops during the wet autumn the year before, I was being a bit cautious.

"It was certainly impressive – the crop raced out of the ground and tillered so well that I decided to put the brakes on it, delaying the first nitrogen until the second week of March, limited to 60kg/ha.

"It's vigour alone speaks volumes; as well as producing robust plants that could be very useful for shading blackgrass out.

"The variety has a very good specific weight, helped by its excellent disease resistance. It could be a very attractive variety as a feed barley, and if it has good thick stems it could be a good one for the AD market as well. If it performs as I hope, it will be a definite contender on this farm."

Drought tolerance

While disease resistance and high specific weight are key attributes to manage wet conditions, straw length is a recognisable trait within most cereal species that denotes good drought tolerance. In the drier parts of the eastern region a tall-strawed variety will generally offer better durability and greater stem carbohydrate reserves to withstand drought better. Having a high specific weight will also retain yield.

C2 Aleksandra seed will be limited autumn 2025 due to circumstances beyond Agrovista's control. Please order early to guarantee availability.

2-Year untreated yield, Ireland harvest 22-23

Control varieties	Yield as a 100% control Untreated	Yield as a 100% control Untreated	MEAN 2 Year Untreated Yield
	7.49 t/ha	5.6t/ha	6.45t/ha
ALEKSANDRA	118	122	120
CASSIA (C)	89	102	95.5
INFINITY (C)	103	85	94
BELFRY (C)	108	113	110.5
KWS TARDIS	84	106	95
BORDEAUX	89	104	96.5

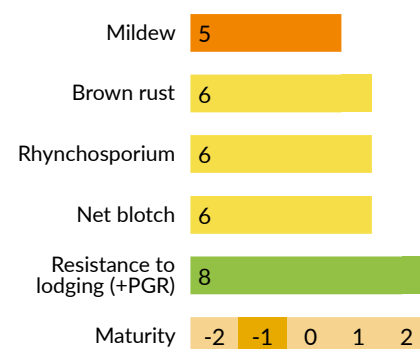
SOURCE: Breeder data 2022-2023

High specific weight also helps in other quarters. From a crop establishment perspective, a bold, large grain will boost seedling vigour and offer better establishment in difficult conditions.

Seed grower Colin Chappell, who drilled Aleksandra autumn 2024 was delighted with Aleksandra's rate of emergence.

KWS Tardis - 2 Row

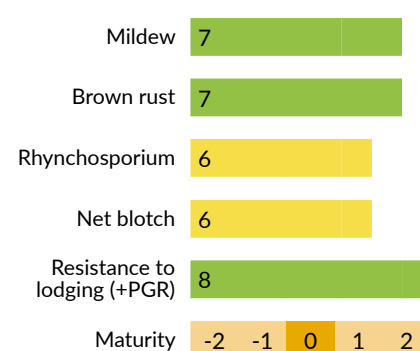
- A reliably solid 2-row feed variety with excellent standing ability offering maximum yield potential on fertile and well bodied land
- Best comparative performance in the eastern and northern region
- Mid-length straw and generally earlier than the majority



REGION	YIELD
UK	103
EAST	104
WEST	101
NORTH	104
Untreated yield	85
Light soils	103
Heavy soils	106
Spec. weight	70.1

LG Caravelle - 2 Row

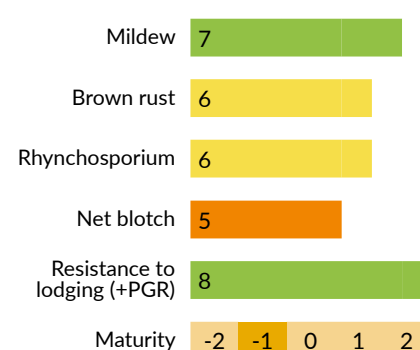
- Notable yield improvement across east and west with and without fungicide - good resistance values across main diseases
- Major competitor to 6-row offer, especially in eastern regions
- Good grain quality and lower screenings
- Some lodging harvest 23, but fewer instances in 2024 raising rating to an '8'



REGION	YIELD
UK	106
EAST	107
WEST	105
NORTH	104
Untreated yield	91
Light soils	104
Heavy soils	106
Spec. weight	71.4

Inys - 6 Row

- First hybrid 6-row to challenge Syngenta dominance in the UK market
- Joint highest UK feed yield available and highest in the east
- Very good standing with minimal lodging and notable height reduction with PGR
- Very similar to Integral agronomically but superior mildew resistance
- Lowest brackling of all hybrids

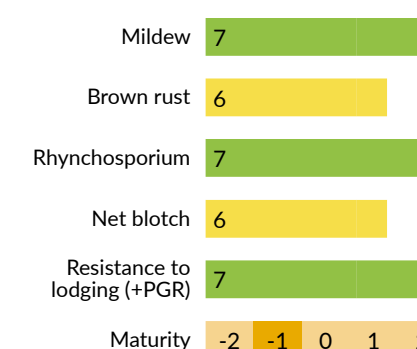


REGION	YIELD
UK	109
EAST	109
WEST	(112)
NORTH	(106)
Untreated yield	90
Light soils	(107)
Heavy soils	(108)
Spec. weight	69.3

Hybrid

SY Kestrel - 6 row

- SY Kestrel is the first of the new Hyvido Neo hybrid barley varieties on the 2025 AHDB Recommended List
- Broad spectrum viral protection brings built in resistance against the 3 major serotypes of BYDV as well as tolerance to WDV
- Allows adoption of a No/low insecticide option - cost saving, SFI scheme and positive impact on beneficial insect populations

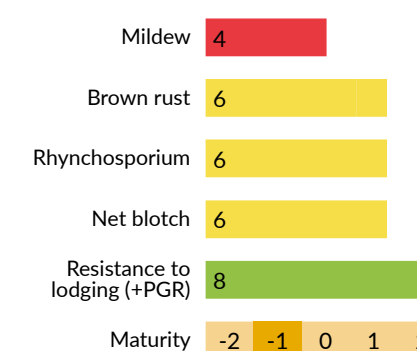


REGION	YIELD
UK	104
EAST	102
WEST	(108)
NORTH	(104)
Untreated yield	86
Light soils	(104)
Heavy soils	(100)
Spec. weight	68.7

Hybrid

Integral - 6 row

- Higher yielding than KWS Feeris in every region (+3.5% UK)
- Solid disease package with BYDV tolerance
- Mildew is not an issue as shown by similar ratings to KWS Feeris and a much better untreated yield
- Very stiff strawed with early maturity (one of the stiffest varieties on the RL)
- Good grain quality with a high specific weight 69.4
- Consistently high annual yield over all soil types



REGION	YIELD
UK	105
EAST	105
WEST	(107)
NORTH	(103)
Untreated yield	91
Light soils	(102)
Heavy soils	(105)
Spec. weight	69.4

BYDV tolerant



Seed treatment



Agrovista
exclusive

SEED TREATMENT

Voltek seed treatment for cereals

Our exclusive cereal seed treatment Voltek is commercially available, but we continue to test and trial the product to ensure that our customers continue to receive value for money relative to crop income and other competitor products.

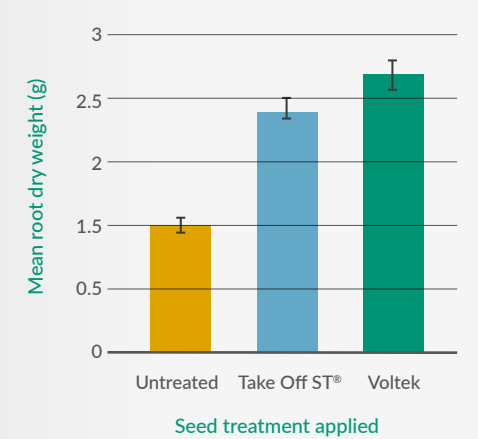
Voltek is a unique biostimulant seed treatment complex for cereal and oilseed rape crops that supports germination and improves crop establishment. In light of difficult spring 2024 drilling conditions, demand for the novel seed treatment was exceptionally high with 750 tonnes being treated nationally.

We would recommend it ought to be included as a key establishment tool for this coming autumn too, giving young seedlings the best possible start, helping to counter whatever stresses and establishment challenges are encountered.

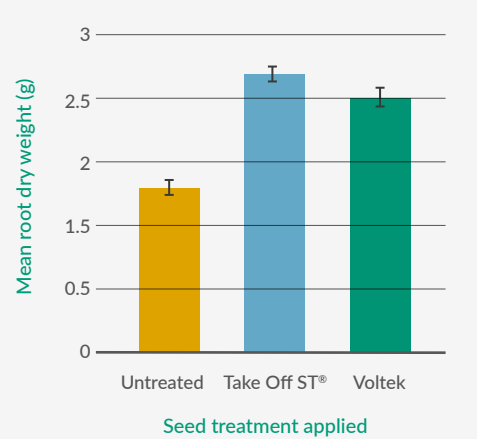
Nottingham University and Agrovista have been involved in the trialling and development of Voltek for some time. Recent assessments by Nottingham University on root development versus untreated and against other commercially available products have shown marked benefits in favour of Voltek.

Voltek – Nottingham University July 2023

Effect of seed treatment on root growth
25 d after GS12 transplant



Effect of seed treatment on shoot growth
25 d after GS12 transplant



Error bars = 95% confidence limits
SOURCE: Data kindly supplied by Unium Biosciences Ltd.

CONCLUSIONS

1. Voltek show 10% increased emergence
2. Voltek increases rooting significantly
3. This builds greater robustness to drought etc
4. Its not surprising Take Off ST® has more shoots as Voltek diverts the energy to the root production
5. Voltek is approx 40% lower cost
6. Manufacturer trials in 2022 showed Voltek gave a 0.75t/ha winter wheat yield increase over Take Off ST®



Recent assessments by Nottingham University on root development versus untreated and against other commercially available products have shown marked benefits in favour of Voltek



Untreated



Voltek

Unlike other commercially available root stimulant seed treatments Voltek contains both a phosphite and an innovative metabolite called Pentanoate which is an organic keto acid-based compound proven to positively influence a range of biological processes including root lengthening and biomass, and chlorophyll production leading to heightened photosynthetic capacity.

Phosphite enhances the activity of an enzyme called Nitrate Reductase which is key in nitrogen assimilation in young seedlings, catalysing nitrate to nitrite conversion to build plant biomass and structures. The effect of phosphite on Nitrate Reductase activity is more pronounced under mild stress.

Voltek's positive effects on establishment are enhanced when conditions are less than favourable as root stimulation enables better access to water and soil nutrients from day one.

Improved germination

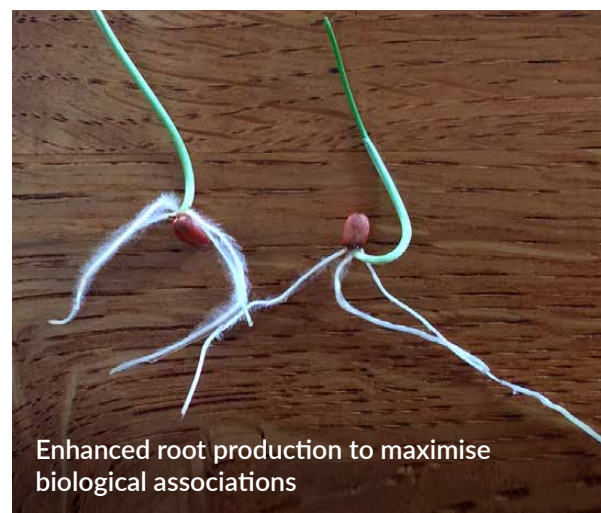
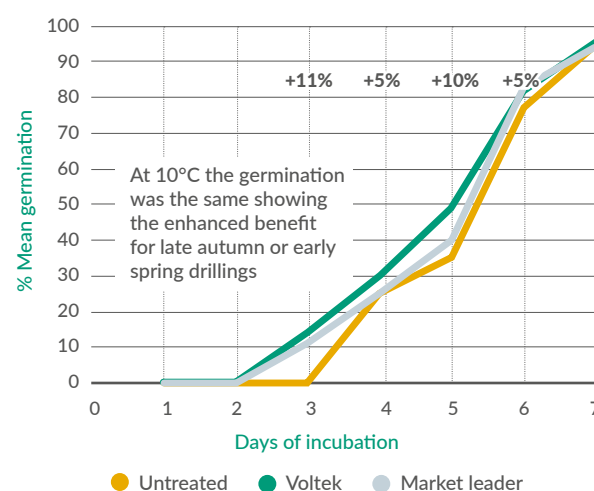
Trials in 2021 by Nottingham University showed that regardless of incubation period use of Voltek as a seed treatment enhanced germination percentage over untreated and was consistently better than other competitor products.

These differences remained when incubation temperature was adjusted, which highlighted that whether growers drilled late autumn or early spring Voltek would retain its efficacy over competitors.

Voltek benefits from the day the seed is drilled

- Enhanced germination
- Increased root and shoot biomass
- Improved establishment rate and crop uniformity
- Increased stress tolerance including over wintering

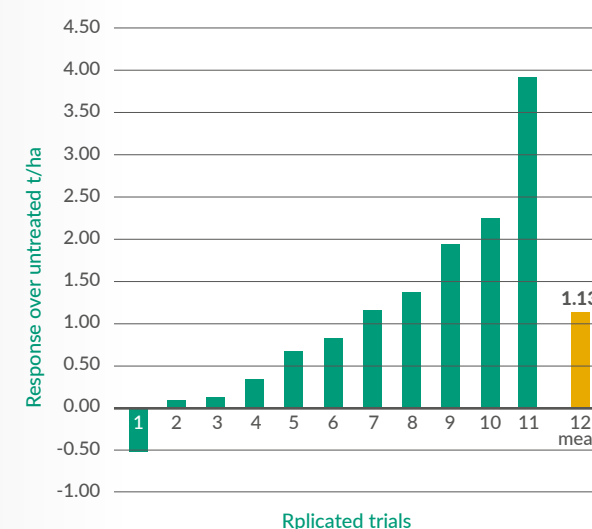
Timecourse of wheat germination at 7°C with seed dressings University of Nottingham 2021



Enhanced root production to maximise biological associations

Disclaimer: Trials data and imagery kindly provided by Unium Bioscience Limited

Yield response in winter wheat

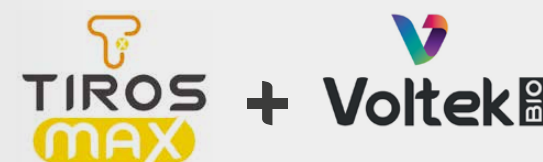


Crop	Rate	Application
Cereals (including mobile seed dressing)	1.0 l/t	Seed treatment

Other features

- Liquid formulation
- Tank mixable
- Fully crop safe
- Cost effective solution

Voltek can be safely applied with all other seed treatments. Where used in conjunction with Tiros Max an adjusted version excluding phosphite called Voltek Bio is used.



TIROS MAX and Voltek Bio seed treatment

Tiros Max is an enhanced version of the original TIROS nitrogen-fixing seed treatment commercialised by Agrovista exclusively in 2020. Voltek Bio is a biostimulant complex metabolite containing a unique blend of keto acid, amino acids, and additional nutrients.

By choosing to use Tiros Max and Voltek Bio seed treatments in combination, growers are addressing the biological and biostimulant requirements of a crop right from day one.

Tiros Max contains enhanced endophyte colonies – the microorganisms found between living plant cells. Endophytes can influence a range of beneficial behaviours in a plant including fostering growth, fixing nitrogen and reducing the impact of abiotic stress. More colony forming units per seed lead to better colonisation overall and ultimately more consistent results. Enhanced colonisation will maximise the nitrogen fixing and phosphate sequestering power of the endophytes.

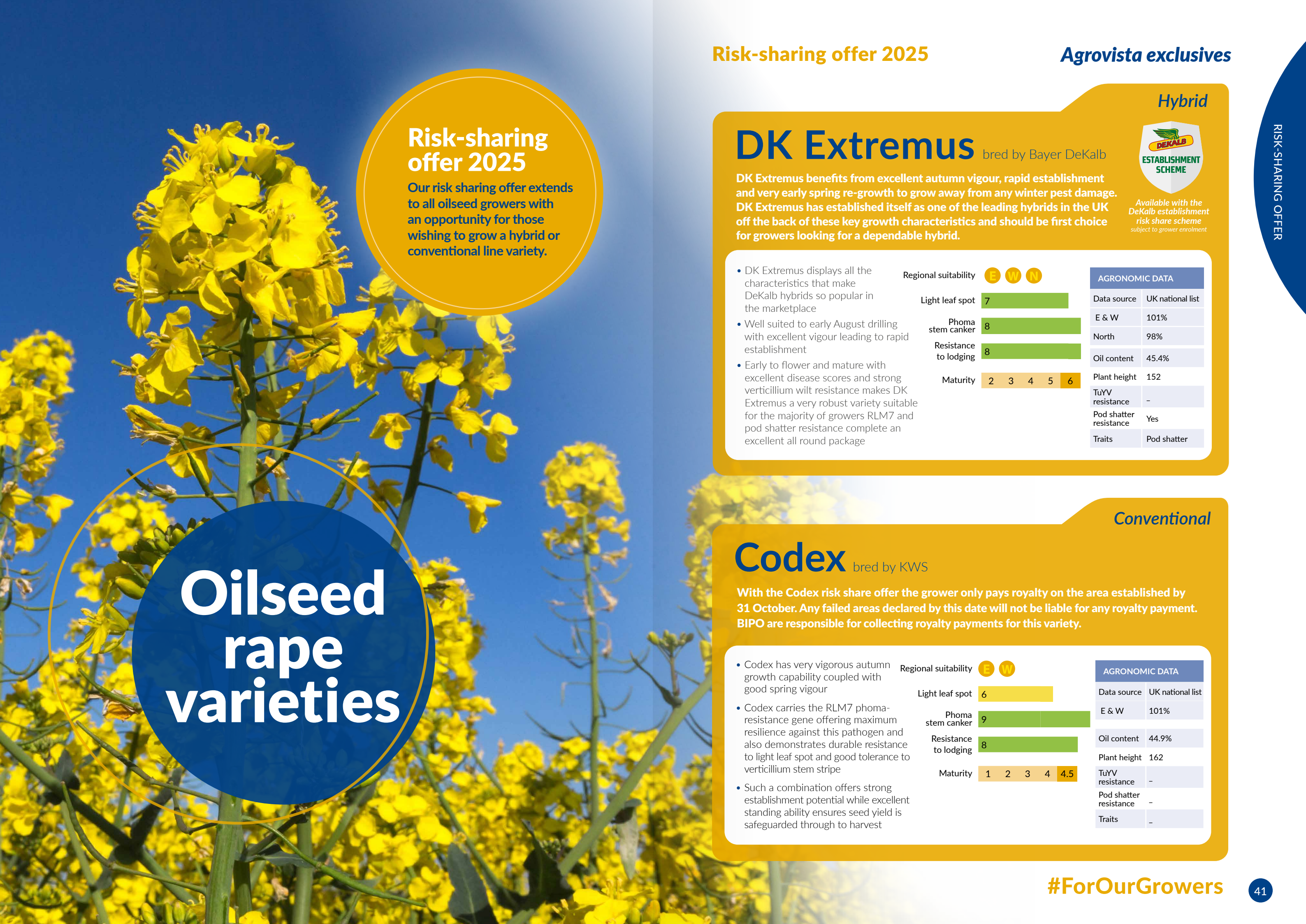
Because Tiros Max optimises what is available in the soil, it reduces the reliance on artificial fertiliser products. The specific bacterial endophytes present in Tiros Max have been carefully selected to fix atmospheric nitrogen and sequester other nutrients from the soil, living within the whole plant from roots to shoots.

This results in improved root and shoot biomass, which leads to increased drought stress tolerance. Initially, given some seedbed conditions, Tiros Max-treated seed can be slower to emerge. The complex prioritises the plants resources to where they are most needed which can be root growth ahead of shoot growth.

In contrast, Voltek Bio is a biostimulant metabolite complex which boosts nitrogen and carbon uptake, to aid germination and support crop establishment. In doing so, it maximises the nutrients made available by Tiros Max, whilst helping to stimulate the plant to grow away from potential stresses and pressures.

Harnessing the power of these targeted products in combination provides a connected approach to early plant nutrition, helping growers to make the most of crop establishment and to benefit the plant longer term.

The implications of this guidance, alongside environment, cultivation etc can have consequences for crop establishment and one advantage of the endophytes in the Unium Bioscience's seed treatment, Tiros Max, is the ability to reduce these impacts and ensure the crop prioritises resource to where it is most needed, often this is into root growth ahead of shoot growth.



Risk-sharing offer 2025

Our risk sharing offer extends to all oilseed growers with an opportunity for those wishing to grow a hybrid or conventional line variety.

Oilseed rape varieties

Hybrid

DK Extremus

bred by Bayer DeKalb

DK Extremus benefits from excellent autumn vigour, rapid establishment and very early spring re-growth to grow away from any winter pest damage. DK Extremus has established itself as one of the leading hybrids in the UK off the back of these key growth characteristics and should be first choice for growers looking for a dependable hybrid.

Available with the DeKalb establishment risk share scheme subject to grower enrolment

- DK Extremus displays all the characteristics that make DeKalb hybrids so popular in the marketplace
- Well suited to early August drilling with excellent vigour leading to rapid establishment
- Early to flower and mature with excellent disease scores and strong verticillium wilt resistance makes DK Extremus a very robust variety suitable for the majority of growers RLM7 and pod shatter resistance complete an excellent all round package

Regional suitability

E W N

Light leaf spot 7

Phoma stem canker 8

Resistance to lodging 8

Maturity 2 3 4 5 6

AGRONOMIC DATA	
Data source	UK national list
E & W	101%
North	98%
Oil content	45.4%
Plant height	152
TuYV resistance	-
Pod shatter resistance	Yes
Traits	Pod shatter

Conventional

Codex

bred by KWS

With the Codex risk share offer the grower only pays royalty on the area established by 31 October. Any failed areas declared by this date will not be liable for any royalty payment. BIPO are responsible for collecting royalty payments for this variety.

- Codex has very vigorous autumn growth capability coupled with good spring vigour
- Codex carries the RLM7 phoma-resistance gene offering maximum resilience against this pathogen and also demonstrates durable resistance to light leaf spot and good tolerance to verticillium stem stripe
- Such a combination offers strong establishment potential while excellent standing ability ensures seed yield is safeguarded through to harvest

Regional suitability

E W

Light leaf spot 6

Phoma stem canker 9

Resistance to lodging 8

Maturity 1 2 3 4 4.5

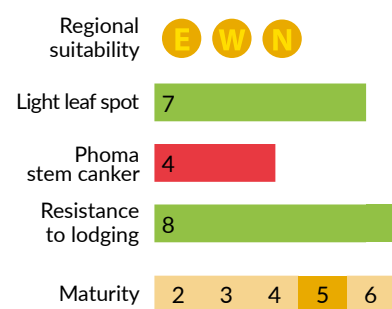
AGRONOMIC DATA	
Data source	UK national list
E & W	101%
Oil content	44.9%
Plant height	162
TuYV resistance	-
Pod shatter resistance	-
Traits	-

Pi Pinnacle bred by Mike Pickford

Conventional

Pi Pinnacle is the highest gross output variety on the RL with an impressive level of autumn vigour for a conventional variety.

- Pi Pinnacle from Cotswolds based Mike Pickford, the last independent OSR breeder
- Pi Pinnacle has a high number of pods per plant producing an abundance of seed which has helped to make the variety the highest yielding conventional OSR available in the UK today
- Early vigour is a match for Campus with yield a good 5% higher than that variety
- Good standing power and light leaf spot scores complete an impressive all round package



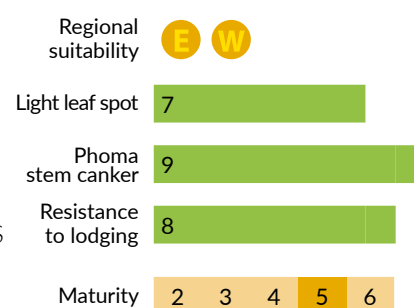
AGRONOMIC DATA	
Data source	AHDB RL
E & W	101%
North	101%
Oil content	44.5%
Plant height	152cm
TuYV resistance	-
Pod shatter resistance	-
Traits	-

Maverick bred by NPZ UK

Hybrid

Maverick is the highest yielding variety on the Recommended List. Its excellent yield potential is combined with exceptional RlmS and Rlm7 stem canker resistance, TuYV resistance, and outstanding autumn and spring vigour.

- Maverick has the best phoma resistance seen in trials thanks to it's combination of both RlmS and Rlm7 resistance traits
- Autumn vigour is standout point for Maverick making it a dependable option it testing autumns for establishment
- Similarly it's spring regrowth has seen it outgrow potential pest damage from pigeons and larvae where other varieties have sat and struggled



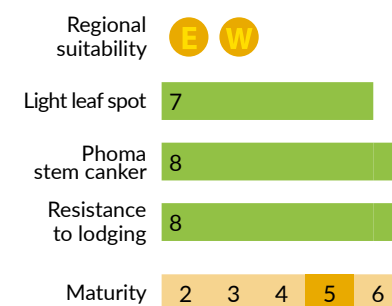
AGRONOMIC DATA	
Data source	AHDB RL
E & W	109%
North	100%
Oil content	46%
Plant height	154cm
TuYV resistance	Yes
Pod shatter resistance	No
Traits	TuYV, RlmS, Rlm7

Commodore bred by DSV

Hybrid

Commodore sits as an RL Candidate for the upcoming season. Throughout it's time in national list trials Commodore has stood to be a highly competitive rival to the leading E/W hybrids and has also been number 1 variety in Denmark.

- Powerful pods – Commodore benefits from DSV's extensive R&D into making pods more resilient to adverse weather conditions once fully ripened without relying on single gene pod shatter genetics
- Commodore's strengths are based on an exceptional leaf and stem health that seems to be unique in Europe's vast range of different varieties
- The pod health has proven to be exceptional in the wet conditions of the years 2023 and 2024 with the lowest level of pod diseases of all DSV varieties.



AGRONOMIC DATA	
Data source	AHDB RL
E & W	107%
North	103%
Oil content	46.8%
Plant height	161cm
TuYV resistance	Yes
Pod shatter resistance	Powerful pods
Traits	TuYV

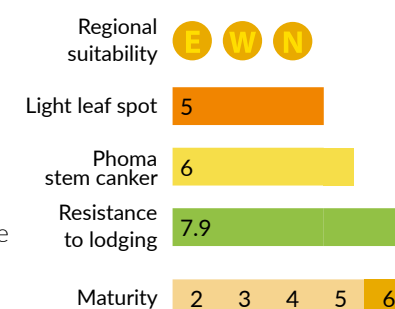
Clearfield

Beatrix CL bred by DSV

Hybrid

Beatrix CL sits as joint highest yielding variety for the E/W region but benefits from the highest vigour out of all Clearfield varieties making it our default choice in this category.

- Displays exceptional gross output for a Clearfield variety. Quad trait hybrid offering TuYV, pod shatter, RLM7 stem canker resistance and Clearfield technology
- Early to mature with a medium height canopy giving very good lodging resistance
- Outstanding winter hardiness



AGRONOMIC DATA	
Data source	AHDB RL
E & W	94%
North	89%
Oil content	44.5%
Plant height	149cm
TuYV resistance	-
Pod shatter resistance	-
Traits	Clearfield, TuYV, Rlm7, pod shatter

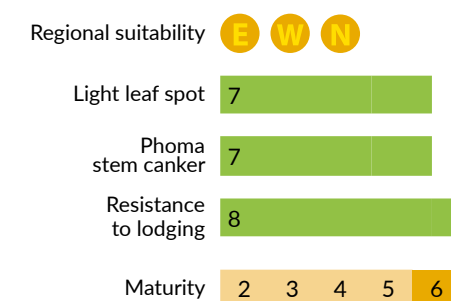
Clubroot tolerant

Crusoe bred by NPZ UK

Hybrid

Crusoe is a restored hybrid Recommended List variety for growing on land infected with common strains of clubroot. It has a high gross output, high resistance to stem canker, good resistance to Light leaf spot with good stem stiffness and resistance to lodging. It is TuYV resistant.

- Crusoe is the latest of the highly successful NPZ UK clubroot breeding programme taking yields to nearly 10% higher than former stalwart variety Crome in the E/W region
- Phoma resistance has always been the Achilles heel of the clubroot varieties. However Crusoe sees a huge leap forwards in it's rating against phoma to bring it inline with leading hybrids
- Benefiting from TuYV resistance too Crusoe provides an unrivalled offer in the clubroot market



AGRONOMIC DATA	
Data source	AHDB RL
E & W	103%
North	101%
Oil content	45.5%
Plant height	155cm
TuYV resistance	-
Pod shatter resistance	-
Traits	TuYV

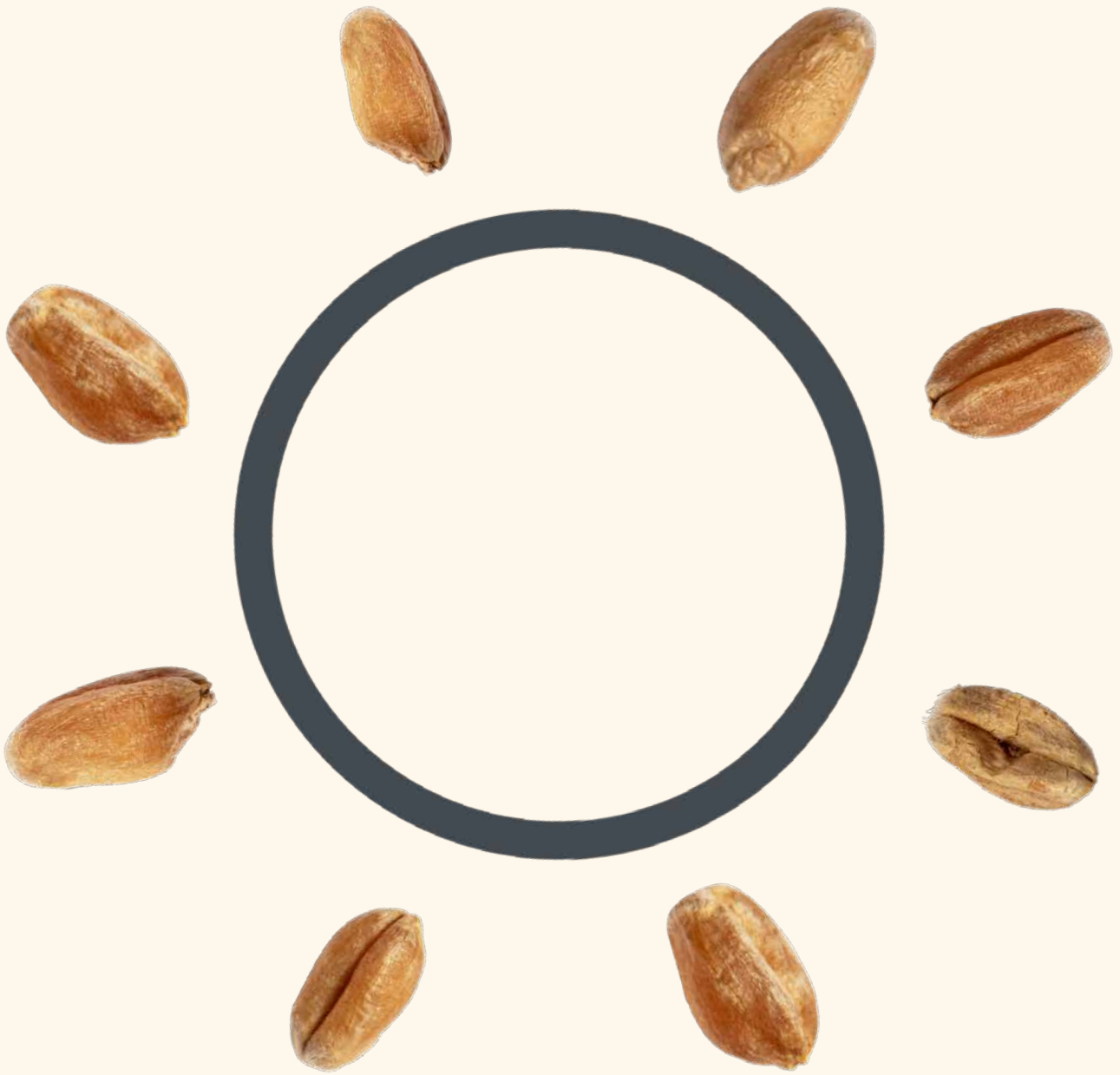
Clubroot tolerant oilseed rape varieties are capable of tolerating the more common strains of the clubroot pathogen but new strains are evolving constantly so complete resistance is not possible. Good agronomic practice such as longer cropping rotations, maintaining soils at pH7, delaying drilling and reducing the prevalence of hosts such as brassica based cover crops as well as using a clubroot tolerant oilseed rape variety will all help to reduce the damaging effects of this disease.



Agrovista UK Limited, Rutherford House, Nottingham Science & Technology Park, University Boulevard, Nottingham NG7 2PZ. 01469 560331 enquiries@agrovista.co.uk

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Coming harvest 2026



sprinter
wheats