

Agrii-Seed

AUTUMN CROPS



Dear Grower

Welcome to this year's edition of the Agrii-Seed Autumn Crops Yearbook, packed full of information that we hope you find useful.

If you have any questions, please don't hesitate to get in touch.



John Miles
Agrii Seed
Technical Manager

We think it is key to give you the information most pertinent to the decision-making happening in your business. If there are older varieties that you're interested in, which aren't covered in these notes please do give us a ring. For many older well known varieties there can be little new to say, but they will still be appearing in Agrii trials and can be seen at iFarm events this summer.

Our **Agrii Advisory List** is created from our own extensive network of yield trials, as well as unique trials like the Agrii blackgrass competition work. This trait and others such as lodging, as well as current disease data, go towards creating our **Variety Sustainability Ratings (VSRs)**. These scores highlight the most robust varieties which demonstrate all-round resilience; a key foundation of sustainable farm practices.

We are proud of the standards set by the **Master Seeds** brand and the value that these standards offer to our customers (you can view the Master Seeds standards on page 84).

Our **Farm Saved Seed** offer continues to strengthen, you can read about this on page 65.

We have the second year of results from the **Green Horizons** sustainable farming trials to share with you on page 8, as well as the efforts being made within the Agrii business to increase our levels of sustainable practices. This topic and others such as Nitrogen Use Efficiency will frame many of the conversations this coming summer so make sure you look at the pages for your local **iFarm** either in this book (page 87) or online at agrii.co.uk/events.

Have a great season, see you in the summer if not before.

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Agrii intelligence

ii™

THE RIGHT SEED

at the right time

Priority delivery for early seed supply.

Agrii RESERVED seed is held back from the previous harvest for growers who require early seed supply the following year.

Select from our industry-leading sustainability rated varieties, rigorously tested in local and national trials to ensure you get high-performance seed tailored to your farm's needs.

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Agrii™

SEED INTELLIGENCE



The Agrii Advisory List and Variety Sustainability Ratings

To assist our agronomists and customers in selecting the right variety for the right situation, we run national and regional variety trials. These include those found on our iFarm and Technology Centre sites – extending from Carnoustie (Angus) down to Saltash (Cornwall), and from Bridgend (South Wales) across to Great Dunmow (East Anglia).

The detailed data from these trials is used to create the Agrii Advisory List. This complements the AHDB Recommended List, with extra analysis and statistically-robust data from Agrii’s extensive national and regional variety testing programme.

The scores provided in this Yearbook within the detailed variety information are from the Agrii Advisory List. Your Agrii agronomist has access to the full Agrii Advisory List data – please speak to them for more information.

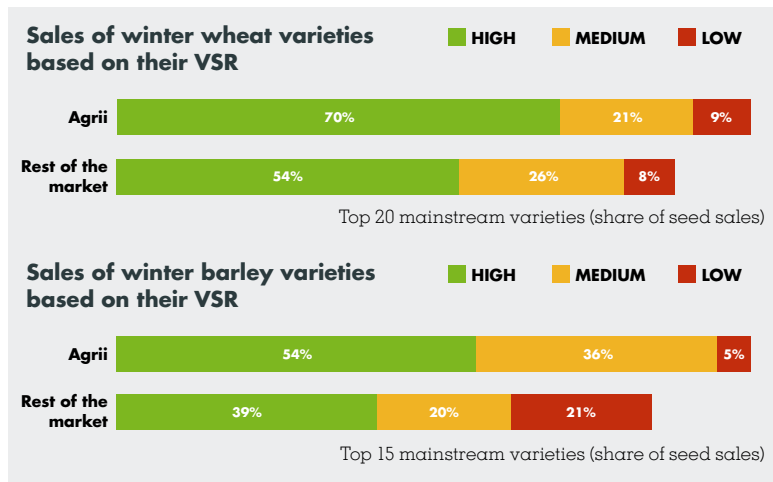
In 2020 we introduced Variety Sustainability Ratings to the Agrii Advisory List. As well as helping individual growers in their variety selection, these sustainability ratings form part of a concerted effort to improve the sustainability of UK arable production as a whole. They raise the technical bar of selecting varieties to a new level.

These sustainability ratings provide an unbiased way of comparing the overall robustness and resilience of varieties. Through collating and analysing ‘real-time’ data, they help us to answer the following questions:

- + Are the varieties technically robust?
- + Which varieties offer consistent yields and quality and reduce agronomic risk?
- + Do they provide the flexibility to use crop protection products more efficiently?

Scores are also added for traits which reduce pesticide usage in the crop, e.g. orange wheat blossom midge, BYDV, TuYV and pod shatter resistance.

The Agrii trend is to choose varieties with a high VSR:



WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE & COVER CROPS

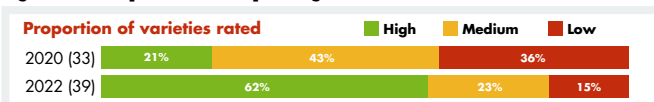
APPENDIX



Encouraging improvements in wheat VSRS

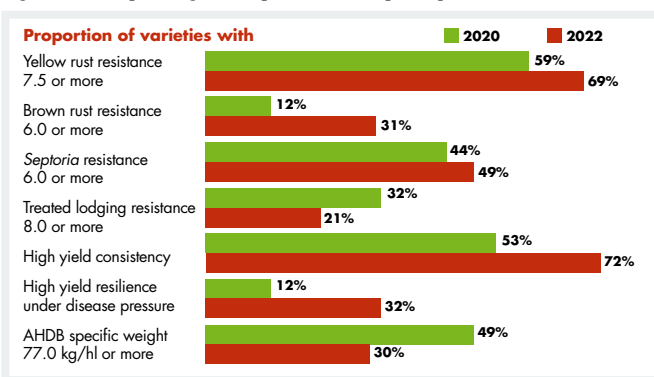
The latest Agrii Advisory List shows that the sustainability of mainstream UK wheat varieties has improved most encouragingly in just two years. However, the data also highlights concerns over resilience with specific weights and possibly also lodging resistance.

Figure 1: Variety Sustainability Ratings 2020-2022



When Agrii introduced VSRS two years ago, the individual ratings for the 33 varieties on the List ranged from 14-30, with 21% rated as high and 36% rated as low. On exactly the same scale, last year's scores range from 17-33 and the number with a high rating has more than tripled.

Figure 2: Variety Ratings for Key Sustainability Components 2020-2022



How are Agrii's Variety Sustainability Ratings calculated?

Individual weighted scores are added together to give the high, medium or low sustainability rating:

WINTER WHEAT	WINTER BARLEY	OILSEED RAPE
VSRS are based on:	VSRS are based on:	VSRS are based on:
<ul style="list-style-type: none"> Foliar disease resistance Lodging Orange wheat blossom midge resistance Yield resilience and consistency Grassweed competitiveness Specific weight Latest optimum sowing date Second vs first wheat performance 	<ul style="list-style-type: none"> BYDV tolerance Foliar disease resistance Lodging Yield resilience Grassweed competitiveness Specific weight 	<ul style="list-style-type: none"> Autumn and spring vigour Height Stem stiffness and lodging Maturity Disease resistance TuYV tolerance Pod shatter resistance Nitrogen use efficiency

A weighting is applied to reflect the relative agronomic importance of each character, their potential to reduce pesticide use and overall cost/tonne.

We have colour-coded the wheat, barley and oilseed rape varieties in this Yearbook to show their Variety Sustainability Ratings.

Please ask your agronomist for details of each variety's detailed scores, and for more information about how the scores were attributed to each variety.

- VERY HIGH VSR
- HIGH VSR
- MEDIUM VSR
- LOW VSR



GREEN HORIZONS BACKGROUND



“Growing food is our mission, and doing that productively and sympathetically is what we mean by sustainable farming. Agriculture has the unique capacity to provide solutions to the challenge of producing healthy, nutritious food while mitigating climate change and protecting biodiversity. Through our Green Horizons initiative, we strive to dovetail that approach with the right agronomic advice to put our growers ahead in this rapidly evolving environment.”

Amy Watkins | Agrii Sustainability Manager

Our vision is to be the trusted partner of choice in providing sustainable advice and agronomic solutions. Green Horizons is our practical framework to provide growers with advice and solutions to improve the resilience of their businesses. We are committed to supporting our customers through one of the most significant transformations to our food system and will continue to adapt along the way.

Find out how to be a part of our sustainable farming network at: www.agrii.co.uk/greenhorizons

Read more about sustainable farming approaches in our **Green Horizons Insight Reports:**



Extending stakeholder engagement:

To continue collaborating with industry experts to ensure the supply chain is joined up in its approach

Download your copies by using the QR code or click on each brochure.





GREEN HORIZONS

IMPROVING OUR SUSTAINABILITY AND YOURS

At Agrii, we strive to provide the most sustainable agronomic solutions on farm, so have been working to reduce the environmental impact of products and services we provide.

Waste management

We understand the responsibility of everyone in the supply chain to reduce waste and recycle more.

As we know, it all starts with the seed, and our seed bags, which are an important waste stream to target on farm. Since autumn 2022, our seed bags are made from PP polypropylene that contains at least 30% recycled materials and are 100% recyclable through specialists such as Agricycle.

GREEN HORIZONS

Green Horizons is Agrii's commitment to sustainable food production.

This bag has been made using 30% recycled material and is 100% recyclable.

Please recycle this bag.

We hope that by making these changes to the way we communicate, process, package and deliver seed, we will be able to help improve the sustainability of your business.

Events and printed brochures

If you attended our iFarm events in the summer, you may have noticed the gradual introduction of our new sustainable marketing materials.

In 2020, we introduced print standards for our literature, to ensure our brochures are **printed on paper from FSC and traceable sources, is carbon balanced**, printed using vegetable inks and has World Land Trust certification.

From January 2023, we are also pleased to announce our **new internal events standards**, to ensure all events are run as sustainably and as environmentally-friendly as possible. So watch out for more plastic-free alternatives and sustainable materials at our future events.



GHG emissions

Businesses are increasingly becoming obliged to undertake carbon audits, and we recognise the impact our products and services can have on your own farm carbon footprint.

Our logistics department continues to look at new ways to reduce the impact of deliveries. So far, we have increased the percentage of our fleet which is electric to help assist with distances closer to depots. For our heavy good vehicles, we are also investigating the viability of moving to HVO (hydrotreated vegetable oil) which reduces carbon emissions by over 90% compared to diesel usage.



The processing and treatment of seed on our sites causes a large peak in our energy consumption in the height of the season. Agrii are proud to have all of their depots and sites running on 100% renewable energy, both from internal and external sources. Solar panels have been installed at sites such as Moreton, and we continue to investigate their installation at other locations.



GREEN HORIZONS TRIALS FOR 2023

Varieties and farming system trials are an important part of work being undertaken as part of the Green Horizons initiative.

Production system comparison trials

With only one year of results it's impossible to draw firm conclusions.

The exceptionally dry spring slowed disease development and led to water and nutrient efficiency in both production systems.

Early season, the direct drilling experienced higher tissue Manganese levels though greater root/soil contact, but by mid-season both systems were showing deficiency.

Nutrition products behaved the same in both production systems boosting nutrient levels and affecting scoreable disease levels.

While the East site dried up, the southern site showed the values of cultural and chemical control on disease pressure. Those being variety, drilling date and weakness in spray programmes such as missed timings.



Direct drill and cover crop field



Conventional full tillage field

Wheat variety establishment trial

Good autumn conditions led to easy establishment of trials in both plough or direct drill comparisons.

One site lost crop biomass due to winter rainfall and the plough sitting wetter, while the other more challenging continuous wheat had issues from straw and chaff residue.

Here it was the plough that resulted in the best establishment.

In the best established scenarios the top performing varieties were the same and aligned with national variety performance trends.

There is a developing picture with the poorest technique and this is something to be discussed further.





GREEN HORIZONS FOCUS ON: FOWLMEERE

You might be familiar with Agrii's Stow Longa site, where our R&D team have carried out large-scale trials over the last 25 years, looking at different rotations, cultivations, impact on blackgrass levels and return on investment.

We'll be continuing with this valuable work on the heavy land at Stow Longa over coming years – adapting and changing our approaches to meet the requirement for knowledge and information on increasing farm resilience.

Over the last year, the Agrii team has also been working to develop a new site at Fowlmere, just south of Cambridge, as a long-term sustainable farming project, this time on light land. We're planning to utilise this site in a similar way to Stow Longa – as a base for demonstrating and sharing knowledge and best practice amongst both our staff and customers. The aim of the work in this demonstration area is to look at how we can start to improve soil resilience on site, particularly with the increasing regularity of dry East Anglian springs – increasing organic matter, biology and capturing more nitrogen.

So, what can you expect to see at Fowlmere?

With the help of local farmer Tom Mead, we are looking at results from four different 1 ha rotational blocks, one block farmed with a conventional rotation not utilising cover crops, one block similar but with cover crops, N-fixing catch crops (e.g. beans/vetch) and bi-cropped beans and oats. The third has AB15 and GS4 2-year stewardship mixes for two years to quantify their addition to the soil and gross margin. Block four is currently examining which catch crops capture the most nitrogen before spring barley. Across the blocks we'll also be looking at the impacts of different cultivations (conventional, direct

drilling and min till) on soil moisture, organic matter and nutrient availability. To measure the results of all of this work, we'll be using real-time soil moisture and nitrogen probes across the site.

Further areas on the site are looking at cover crop establishment and seed bed quality, examining mixture complexity and expense, potential new cover crop varieties and environmental mixtures, considering the good, the bad and the mis-managed.

Look out for our 2023 events calendar as we'd love to welcome you to the site and introduce you to the work that's being done and the results so far!

Go to www.agrii.co.uk/events or scan the QR code:



WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE ROOT & COVER CROPS

APPENDIX



Tramlines Podcast

Tramlines is a farming podcast which delves into current and future topics affecting UK agriculture.

It's all-encompassing to provide our listeners with topics ranging from variety selection to digital innovations to soil health which is in line with latest industry developments. Our discussions are supported by Agrii's extensive trials programmes and environmental work. Each episode is brought to you from the tractor cab, the field, farm office, industry events and we feature some live discussions throughout the season.



TOP 3 SEED PODCASTS ON TRAMLINES:



+ Why Variety Choice is Critical for this Season [CLICK HERE](#)



+ VR Seed: Fail to Prepare or Prepare to Fail [CLICK HERE](#)



+ Making the Most of Home Grown Forage [CLICK HERE](#)

Tune in on your podcast platform:



Winter Wheat

NABIM GROUP 1 MILLING

SKYFALL
KWS ZYATT
CRUSOE

NABIM GROUP 2 MILLING & FEED

KWS EXTASE
KWS PALLADIUM
KWS ULTIMATUM **NEW**

NABIM GROUP 3 BISCUIT/DISTILLING

LG ASTRONOMER

SOFT FEED/DISTILLING

LG SKYSCRAPER
RGT BAIRSTOW
LG TAPESTRY
SWALLOW

HARD FEED

GRAHAM
KWS DAWSUM
LG TYPHOON
GLEAM
FITZROY
CHAMPION
KWS CRANIUM
SY INSITOR



WINTER
WHEAT

WINTER
BARLEY

HYBRID
RYE

WINTER
OATS

WINTER
OILSEED

WINTER
BEANS

FARM
SAVED SEED

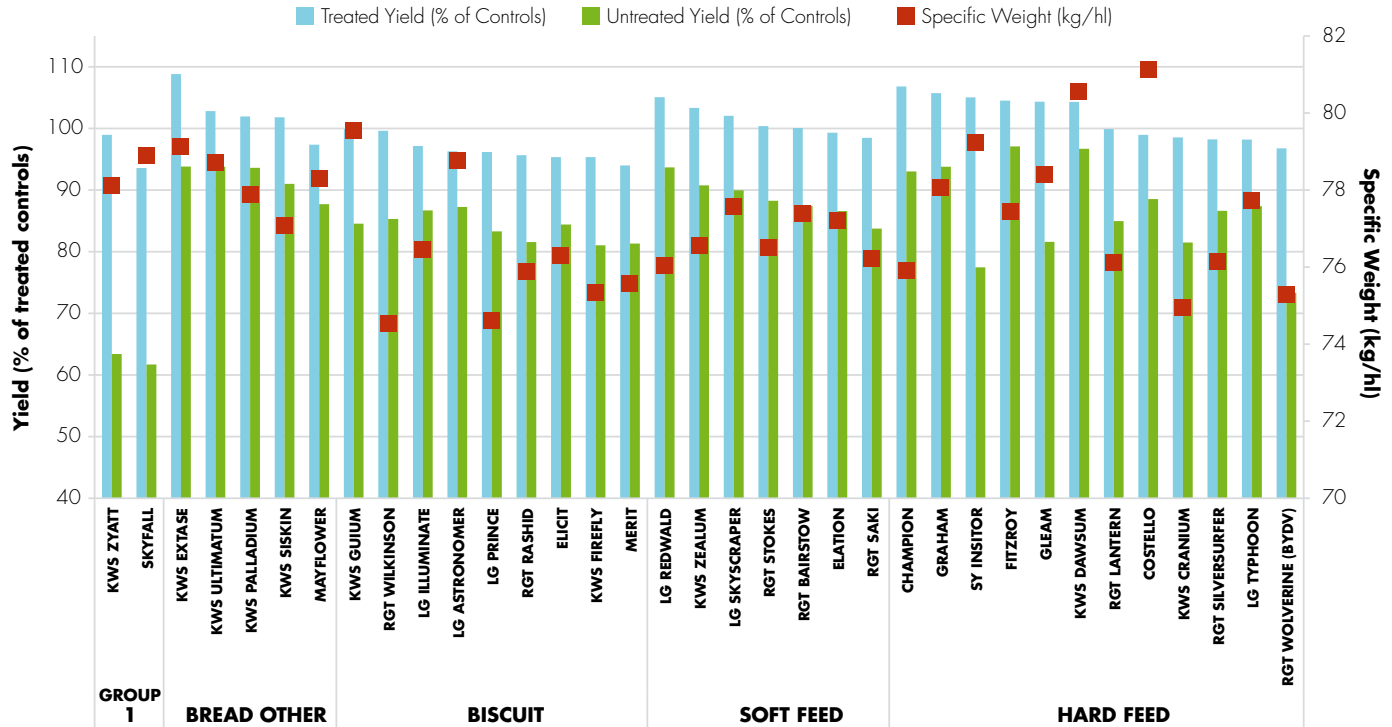
SEED
TREATMENTS

MAIZE
ROOT &
COVER CROPS

APPENDIX



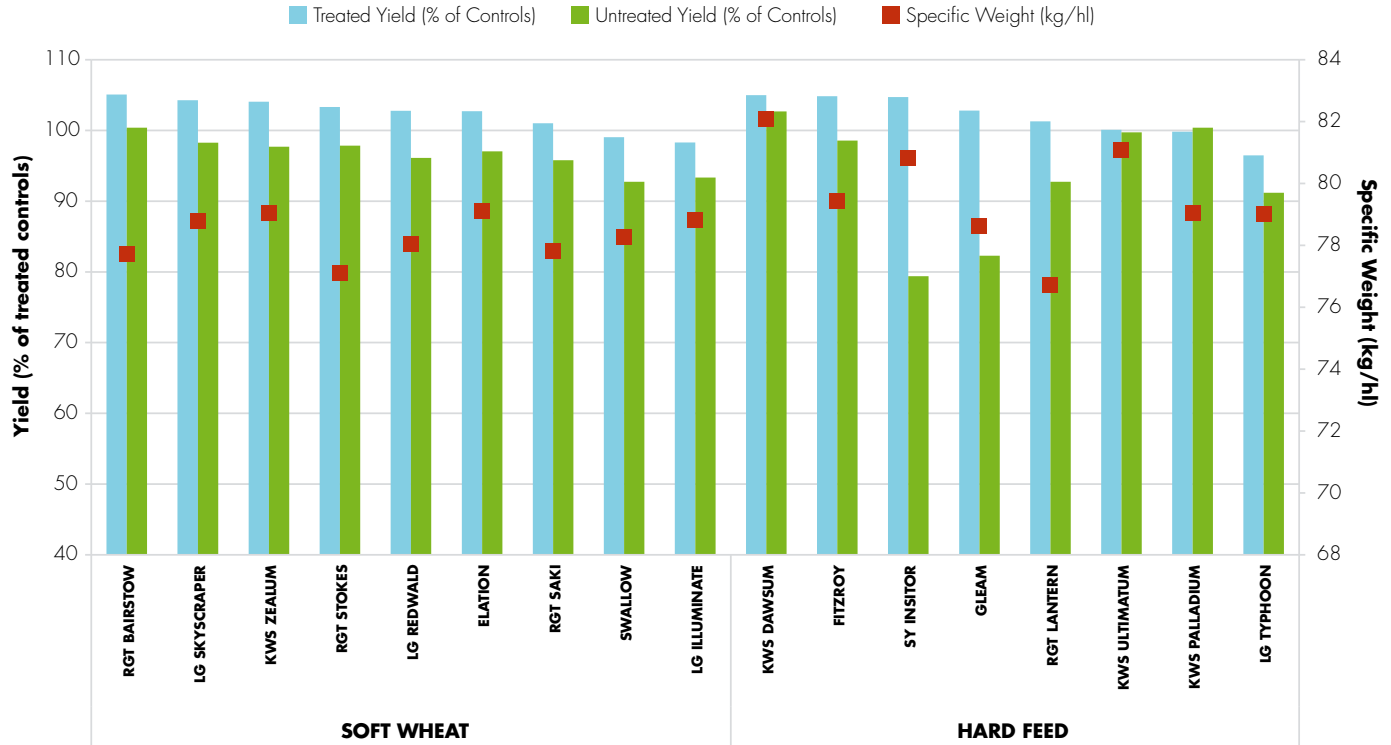
WINTER WHEAT VARIETY TRIALS – 2 YEAR NATIONAL & REGIONAL TRIALS SUMMARY



Source: Mean of sixteen trials over two years. Mean yield of controls = 10.9 t/ha.



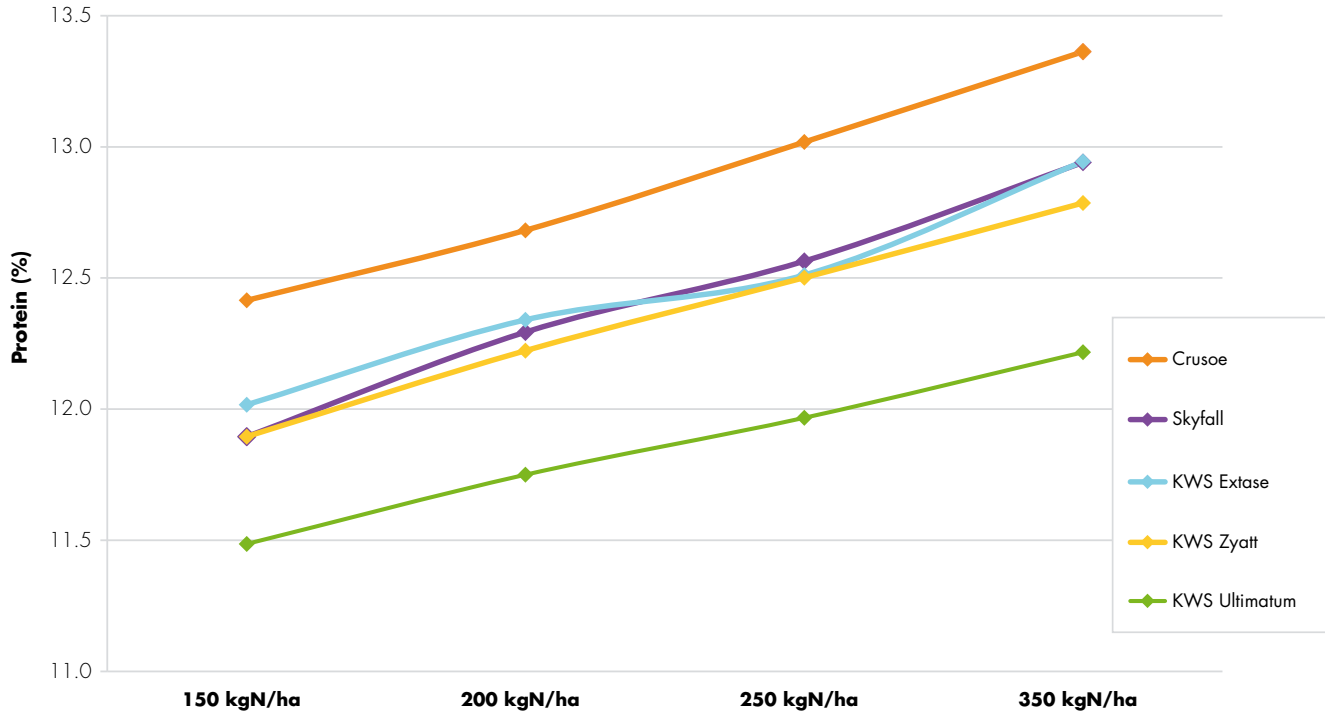
WINTER WHEAT VARIETY TRIALS – 2 YEAR NORTHERN TRIALS SUMMARY



Source: Mean of four trials over three years (Carnoustie and Bishop Burton). Mean yield of controls = 10.5 t/ha.



MILLING WHEAT VARIETY X NITROGEN TRIAL OVER 5 YEARS
% PROTEIN CONTENT BY VARIETY AND NITROGEN RATE



Source: Agrii trials. Mean of 10 sites (5 heavy land and 5 light land sites) – KWS Extase 6 sites (3 years), KWS Ultimatum 2 sites (1 year).



SKYFALL

GROUP 1, MILLING & FEED **MEDIUM VSR**

- + High yields and excellent drilling date flexibility
- + Stiff straw and reasonable *Septoria tritici* resistance

Remains one of the biggest varieties in Agrii seed production due to its consistent performance, late-drill flexibility, stiff straw, early maturity and access to end markets. Widely accepted by UK millers and often finds its way into export cargoes. Grain quality also very useful with Hagberg Falling Number **290**, specific weight **79.2 kg/hl** and protein content **13.1%**.

Suitable for all areas (including Scotland) and soil types, yielding well on heavy land and equally adept on lighter soils. Best drilled from the last week of September onwards and it can be drilled right through to the end of the first week in March. A lower tillering variety so seed rates need to be increased but it remains very competitive against grassweeds. Short, relatively stiff-strawed (7) (8) and early to mature (0). Watch for potential sprouting and prioritise harvesting accordingly.

It has a good disease package but watch yellow rust (2.9) (3.0). It has ratings of 6 for mildew, brown rust (9) (9), *Septoria tritici* (5.4) (5.9) and eyespot resistance (6) as Skyfall carries the Pchl resistance gene. Acceptable performance as a second wheat and resistant to ear blight (7) and orange wheat blossom midge. Its VSR rating has been downgraded this year due entirely to its very low yellow rust resistance.

BREEDER: RAGT SEEDS, UK**PARENTAGE:** C4148 X HURRICANE

KWS ZYATT

GROUP 1, MILLING, UKP EXPORT & FEED **LOW VSR**

The highest yielding Group 1 wheat that has dropped back in popularity due to yellow rust. Good baking quality with excellent grain characteristics and suitable for *ukp* export. Drill from towards the end of September, preferably on heavy land. Excellent second wheat performance. Decently stiff (8) (7) but take care in fertile situations. Relatively early to mature (1) (0). Reasonable mildew (7), brown rust (7.3) (5.7) and *Septoria tritici* (6.1) (6.2) resistance, but very weak on yellow rust (3.3) (3.0). Not resistant to orange wheat blossom midge and moderately susceptible to fusarium ear blight (5.8).

BREEDER: KWS UK**PARENTAGE:** QUARTZ X HERFORD

CRUSOE

GROUP 1, MILLING & UKP EXPORT **MEDIUM VSR**

Crusoe has made somewhat of a comeback given the yellow rust concerns of Skyfall and KWS Zyatt. It retains strong support from the millers due to baking quality and from growers for its ability to lay down protein (13.4%). Best drilled from the third week of September through to the end of October, but no later. Average competitiveness against grassweeds. Short and relatively stiff straw (7.4) (7.0) and medium maturity +1 (0). A good set of disease scores with mildew (7), yellow rust (8.9) (7.8) and *Septoria tritici* (6.2) (6.3), but be careful with brown rust (2.8) (2.3). Not resistant to orange wheat blossom midge.

BREEDER: LIMAGRAIN UK**PARENTAGE:** CORDIALE X GULLIVER



KWS EXTASE

GROUP 2, MILLING, UKP EXPORT & FEED

HIGH VSR



- + High yields and excellent grain quality
- + Outstanding *Septoria tritici* resistance

Now firmly established as the UK's leading winter wheat variety. Consistently high yielding in Agrii trials over the past three years (108%, **treated**, 95% **untreated**). A Group 2 bread with *ukp* for export that has also attracted interest as a feed wheat, due to its high yields, outstanding *Septoria* resistance and bold grain (79.4 kg/hl).

Suitable for all regions of the UK except areas of high sterility risk. Consistent across soil types with good performance on lighter soils. A fast-developing variety best drilled from the last week of September through to the end of December, but it can be drilled to the end of January where necessary. Acceptable second wheat performance and average competitiveness against grassweeds. With tall straw, care is needed particularly on more fertile soils as stem stiffness (7.6) (6.0) could be better and a robust PGR programme should be used. It is early to mature (-1) (-2).

Excellent disease resistance with a very strong rating for *Septoria tritici* (7.8) (7.1), yellow rust (8) (7.5) and brown rust (6.3) (5.2). The juvenile stage of yellow rust may be seen before GS32 and eyespot (3.7) will need attention in a second wheat situation. Not resistant to orange wheat blossom midge.

BREEDER: KWS UK
PARENTAGE: BOISSEAU X SOLHEIO

KWS PALLADIUM

GROUP 2, MILLING & FEED

VERY HIGH VSR



- + A good choice to grow alongside KWS Extase
- + Short, stiff and good all-round disease resistance

Looks like a good partner to grow alongside KWS Extase with similar high yields (103% **treated**, 93% **untreated**). Accepted by the millers as a Group 2-type but not approved for *ukp* export. Grain quality is good with Hagberg Falling Number 320, a slightly lower specific weight (77.6 kg/hl AHDB) and a protein content of 12.4%.

Suitable for all regions including areas of high sterility risk. Performs well across soil types and is an acceptable choice as a second wheat. It can be drilled slightly earlier than KWS Extase but best grown from the last week of September. Medium length straw, decently stiff straw treated (7.6) (7) and untreated (7). Relatively early maturity (-1) (0) and has good resistance to sprouting, according to the breeder.

A clean variety with a very good disease package with mildew (8), yellow rust (9.0) (8.1), brown rust (5.0) (4.7) and *Septoria tritici* (7.4) (6.9). Moderately susceptible to fusarium ear blight (5.6) (6) and not resistant to orange wheat blossom midge.

BREEDER: KWS UK
PARENTAGE: KWS ZYATT X KWS TRINITY



NOTE: Numbers in red – Agrii Advisory List data.
 Numbers in black – AHDB Recommended List data.



KWS ULTIMATUM **NEW**



GROUP 2, MILLING & FEED **VERY HIGH VSR**

- + Offers further diversification on-farm away from KWS Extase
- + Excellent agronomic profile

A new addition to the UK Recommended List with a similar yield level (103% treated, 94% untreated) to KWS Extase and KWS Palladium and equally good agronomic characteristics. Accepted as a Group 2 wheat with outstanding bold grain (79.6 kg/hl) coming from its Costello parentage, Hagberg Falling Number 287, average protein (12.3%) and currently looks to have ukp export potential.

Suitable for all regions except areas of high sterility risk until more information is available. Performs well across a range of soil types including lighter soils and acceptable second wheat performance. Average length straw which looks stiff enough, treated (7.3) (7.0), average grassweed competitiveness and slightly later maturity (+1) (+3).

A good package for disease with mildew (7), yellow rust (9.2) (8.3), brown rust (5.6) (5.8), *Septoria tritici* (6.4) (6.5) and moderately resistant to fusarium ear blight (6.5). Not resistant to orange wheat blossom midge.

BREEDER:	KWS UK
PARENTAGE:	KWS ZYATT X COSTELLO



LG ASTRONOMER



BISCUIT & DISTILLING **VERY HIGH VSR**

- + Agrii's leading biscuit wheat with excellent physical grain quality and rated 'medium' for distilling
- + Good resistance against rusts and *Septoria tritici*

Consistently high yields in Agrii trials over the past three years (98% treated, 88% untreated) with good grain quality HFN 232, 78.2 kg/hl it is accepted for the domestic biscuit market, rated 'medium' for distilling but is not accepted for uks export.

Its best performance is in the East and West regions, in both official and Agrii trials, and its performance drops off a little further north (97% treated). Performs well as a second wheat and, whilst yielding across soil types, its real home is on medium to heavy land. Unsuitable for early drilling but it has performed well in late drilled trials up until the end of January. Medium-long straw but good strength treated (9) (7) and is very competitive against grassweeds. Medium maturity (+1) (0) and average resistance to sprouting (6).

Disease ratings are good, yellow rust (8.5) (7.2), brown rust very good (7.6) (6.8) and *Septoria tritici* (6.2) (5.5), but mildew will need watching (4). Average resistance to eyespot (5) and moderately resistant to fusarium ear blight (6.4). Resistant to orange wheat blossom midge.

BREEDER:	LIMAGRAIN UK
PARENTAGE:	(COUGAR X LEEDS) X BRITANNIA

NOTE: Numbers in red – Agrii Advisory List data.
 Numbers in black – AHDB Recommended List data.



LG SKYSCRAPER

SOFT FEED & DISTILLING **LOW VSR**



- + Consistent high yields and good physical grain quality
- + Soft feed wheat and rated 'medium' for distilling

Very high yielding soft wheat in Agrii trials over the past three years (102% **treated**, 88% **untreated**) and it continues to perform well on the UK Recommended List. Good specific weight (77.3 kg/hl) and rated 'medium' for distilling but unsuitable for uks export.

Suitable for all regions of the UK including areas of high sterility risk. Consistent across soil types including lighter soils and very high yielding as a second wheat, even though it is best grown as a first wheat. Proven to be one of the most consistent varieties over the past few years, probably due to its taller straw. Best drilled from the start of October through to the end of January. A high tillering variety, fast to grow away in the spring and average competitiveness against grassweeds.

Fairly tall straw of very average strength, treated (6) (6) and untreated (6) (5), so it needs a robust PGR programme. Reasonably early to mature (0) (0). Its disease profile is very average, with mildew (7), yellow rust (7.4) (7.0), brown rust (5.3) (3.9) and poor *Septoria tritici* (4.9) (4.4). Moderately resistant to fusarium ear blight (6.4). It is resistant to orange wheat blossom midge.

BREEDER: LIMAGRAIN UK

PARENTAGE: (CASSIUS X NAWW29) X KWS SANTIAGO

RGT BAIRSTOW

SOFT FEED & DISTILLING **HIGH VSR**



- + Rated 'good' for distilling
- + Reasonably good disease profile

RGT Bairstow was a new addition to the UK and Scottish Recommended Lists last year. It has given high yields in Agrii trials (100% **treated**, 87% **untreated**) with consistent performance across the UK. Grain quality average with Hagberg Falling Number 228 and specific weight 76.2 kg/hl, but it is rated 'good' for distilling so is likely to be of interest in Scotland where it has performed consistently well (103%).

Suitable for all soil types, including lighter land, and it performs well as a second wheat. With an average speed of development it is not suited to very early drilling but will perform well through to the end of January. Very competitive against grassweeds in Stow Longa trials. Moderately tall with average straw strength treated (6) (6) and (6) (5) untreated so it requires a robust PGR programme. Relatively late to mature (+2) (+4).

RGT Bairstow's disease scores are decent enough with mildew (6), yellow rust (7.5) (7.2), brown rust (6.2) (5.6) and *Septoria tritici* (6.0) (5.9). Moderately susceptible to fusarium ear blight and resistant to orange wheat blossom midge.

BREEDER: RAGT UK

PARENTAGE: (REVELATION X KWS SANTIAGO) X COUGAR





LG TAPESTRY

SOFT FEED & DISTILLING **VERY HIGH VSR**

- + A non-Recommended List soft feed-type
- + Midge resistant with good overall foliar disease resistance

A high yielding soft feed variety (101% treated, 89% untreated) in Agrii trials and a specific weight similar to LG Skyscraper. Although it just missed the AHDB or SRUC Recommended List, it has a very high sustainability rating and achieved a 'medium' rating for distilling, but disease resistance might limit interest further north.

Suitable for all regions excluding areas of high sterility risk and best grown on heavy soil. Good performance as a second wheat. Unsuitable for early drilling but its late drilling performance is good up until the end of January. Its grassweed competitiveness is excellent. Medium height (86 cm) and stiff straw (8 treated, 6 untreated) and medium maturity (+1).

Good disease scores with yellow rust (8.4), brown rust (6.8) and *Septoria tritici* (6.2), but mildew (4) will require some attention. Resistant to orange wheat blossom midge.

BREEDER: LIMAGRAIN UK

PARENTAGE: GARRUS X LGW77



SWALLOW

SOFT FEED & DISTILLING **MEDIUM VSR**



- + Soft-type for the North and rated 'good' for distilling
- + Short, stiff straw and good all-round disease resistance

A high yielding soft wheat in Agrii Scottish trials over the past two years (99% treated, 93% untreated). Average physical grain quality (76.7 kg/hl) and similar to that of LG Skyscraper and RGT Bairstow. Rated 'good' for distilling.

Best grown in the North, including in areas of high sterility risk and sown in the main drilling window until further information is available. It can be grown on both heavy and lighter soils with particularly good performance on the latter. It is a reasonable second wheat choice and its grassweed competitiveness is still under evaluation at Stow Longa.

Medium height (80 cm), stiff straw treated (8) (8) and untreated (8) (8) but its maturity is later (+1) (+3).

It has reasonable disease ratings for mildew (6), yellow rust (6), brown rust (5) and *Septoria tritici* (5.5) (4.2). It appears to be more susceptible to fusarium ear blight than the official rating suggests (5.6). Resistant to orange wheat blossom midge.

BREEDER: BLACKMAN AGRICULTURE UK (LTD)

UK AGENT: SECOBRA

PARENTAGE: KWS GATOR X COUGAR

NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



GRAHAM

HARD FEED **MEDIUM VSR**

- + Very high yields and good physical grain quality
- + Wide drilling window and good resistance against *Septoria tritici*

Graham certainly can yield and has done so in the Agrii national trials over the last eight years, where it has been consistently in the top five. Its high treated yields (**105% treated, 93% untreated**) can be attributed to its good disease resistance and bold grain (**77.6 kg/hl**). More suited for East and West regions with yield tailing off in the North and best not grown in Scotland or other areas of high sterility risk. It can be grown on heavy and lighter soil types, but it should always be grown as a first wheat as its second wheat performance is relatively poor.

Graham can multi-task across the drilling window. It has a relatively slow speed of development in the autumn and is ideal for early drilling, yet it moves relatively quickly in the spring. It has a very prostrate autumn growth habit with medium to high tillering capacity so seed rates can be reduced. Agrii late-drill trials show that it continues to yield well through to the end of January. Average competitiveness against grassweeds. Has average straw length and decently stiff straw, treated (**7.6**) (**7**) and untreated (**6.6**) (**6**). Early to mature (-1).

Apart from a lower eyespot score (**4**), other disease ratings are generally good with mildew (**6**), yellow rust (**7.8**) (**6.5**) and *Septoria tritici* (**6.7**) (**6.7**), but watch brown rust (**4.7**) (**3.9**). Not resistant to orange blossom midge.

BREEDER: SYNGENTA UK LTD**PARENTAGE:** EXPERT X PREMIO

KWS DAWSUM

HARD FEED **VERY HIGH VSR**

- + High yields and excellent physical grain quality
- + Drilling date flexibility and all-round disease resistance

High yields (**104% treated, 96% untreated**) with very bold grain (**78.1 kg/hl**). It is considered as a Costello-replacement with 4% more yield. KWS Dawsum may also be accepted into some low grade flour blends.

Suitable across the UK including areas of high sterility risk. It can be grown across heavy and light soils and has a wide drilling window – mid-September through to the end of January. It is also an acceptable second wheat choice. A high tillering variety of medium height (**83 cm**) and reasonably stiff straw treated (**7**) (**7**) and untreated (**7**) (**6**). Average competitiveness against grassweeds in Stow Longa trials and medium-late in its maturity (+1) (+3).

A good set of disease scores for mildew (**8**), yellow rust (**9**) (**8.1**), brown rust (**6.8**) (**7.0**) and *Septoria tritici* (**6.4**) (**6.5**). Moderately resistant to fusarium ear blight (**6.8**) and it is not resistant to orange wheat blossom midge.

BREEDER: KWS UK**PARENTAGE:** KWS KERRIN X COSTELLO

NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



LG TYPHOON

HARD FEED **VERY HIGH VSR**



- ✦ **A new hard feed wheat with high yields and a good second wheat**
- ✦ **Good all-round foliar disease and midge resistance**

A hard feed variety that performed well in Agrii's national trials over the past two years (**98% treated, 87% untreated**). It is a slightly lower yielding variety but opens up opportunities to reduce input costs due to its improved agronomic profile. In addition, it has reasonable physical grain quality (**77.1 kg/hl**).

Suitable for all regions including areas of high sterility risk. It is adaptable across heavy and light soils and suitable for drilling from mid-September through to the end of December. It has performed well in the second wheat slot and has average competitiveness against grassweeds. Tall but with decent strength straw, treated (7) (7) and untreated (7) (6) and medium maturity (+1) (+2).

A good set of disease scores for mildew (6), yellow rust (9) (8.1), brown rust (6.1) (4.6) and *Septoria tritici* (7.3) (7.1) but appears to be moderately susceptible to fusarium ear blight (5.8). Resistant to orange wheat blossom midge.

BREEDER:	LIMAGRAIN UK
UK AGENT:	AGRII
PARENTAGE:	GARRUS X LGW88

GLEAM

HARD FEED **MEDIUM VSR**



Clearly very high yielding (**105% treated, 81% untreated**) and reasonable grain quality (**77.3 kg/hl**) but its market share is set to slide due to increased disease susceptibility, particularly yellow rust.

Suitable across soil types and regions and has yielded well in second wheat trials. Relatively weak straw, treated (7) (6) and untreated (7) (5), so it needs a robust PGR programme. Its competitiveness against grassweeds is poor so limit it to low risk fields or drill much later to offset risk. Relatively early to mature (0) (0).

Disease scores are respectable with mildew (6.6), brown rust (5.5) (5.0) and *Septoria tritici* (5.7) (6.0), but be careful with yellow rust (5.0) (3.1). Resistant to orange wheat blossom midge.

BREEDER:	SYNGENTA UK LTD
PARENTAGE:	KIELDER X HERFORD



NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



FITZROY

HARD FEED **VERY HIGH VSR**

- + A new non-Recommended List hard feed wheat with consistently high yields
- + Outstanding foliar disease resistance

Another variety not included on the Recommended List, but with plenty to offer. This hard feed variety has performed very well in Agrii trials over the past three years with high yields (104% treated, 96% untreated). Grain quality is average with specific weight 76.0 kg/hl. It should be considered as an alternative to Theodore in the West with similar *Septoria* resistance but a much improved specific weight.

Suitable across the UK excluding areas of high sterility risk, but likely to be mainly grown in the West. Unsuitable for early drilling but can be drilled through to the end of January and is an acceptable second wheat choice. Tall (90 cm) but decently stiff straw (7 treated, 6 untreated), average competitiveness against grassweeds and later maturity (+5).

An excellent set of disease scores with mildew (6.4) yellow rust (8.1), brown rust (7.4) and *Septoria tritici* (7.4). It appears to be susceptible to fusarium ear blight and not resistant to orange wheat blossom midge.

BREEDER:	SECOBRA, FRANCE
UK AGENT:	AGRII
PARENTAGE:	EVOLUTION X STIGG

CHAMPION

HARD FEED **LOW VSR**

- + High yielding hard feed wheat
- + Ideally suited for later drilling and lighter soils

A very high yielding hard feed wheat (107% treated, 93% untreated) and sits near the top of the UK Recommended List so it has attracted a lot of interest from growers. However, it has a very average specific weight (75.5 kg/hl) compared with varieties like Graham, Gleam and KWS Dawsum.

It is most suitable for the East and West regions, adaptable across soil types and performs well as a second wheat. The straw is reasonably tall and rather weak, (6) (5) treated, (6) (3) untreated, so attention needed here. Relatively early in maturity (0) (+1).

Champion has a very good set of disease scores with mildew (6.5), yellow rust (7.9) (7.4), brown rust (5) (4.5) and *Septoria tritici* (8.0) (7.3). It appears to be moderately susceptible to fusarium ear blight (5.7). Resistant to orange wheat blossom midge.

BREEDER:	DSV UK
PARENTAGE:	DSV20122 X REFLECTION





KWS CRANIUM

HARD FEED **MEDIUM VSR**

KWS Cranium's performance has dropped back compared to when it first came on the UK Recommended List, but it still yields in Agrii trials (100% treated, 82% untreated). It also has rather average specific weight 75.8 kg/hl. However, it has performed very well in later-drilled trials and on light soils so it seems to have found its niche.

Suitable across the UK excluding areas of high sterility risk, all soil types including lighter soils and it has performed well as a second wheat. Unsuitable for early drilling but it is a good late driller in Agrii trials but still best drilled before the end of December. Tall straw (89 cm) but good straw strength, treated (8) (7), untreated (8) (8). It has poor grassweed competitiveness and later maturity (+3) (+5).

Mixed disease scores with mildew (6), yellow rust (8.6) (8.4), brown rust (4.4) (3.1) and *Septoria tritici* 5.9 (6.0). Moderate resistance to fusarium ear blight (6.7) and resistant to orange wheat blossom midge.

BREEDER: KWS UK

PARENTAGE: KWS CRISPIN X KWS KIELDER



SY INSITOR

HARD FEED **LOW VSR**

A high input, high output variety with very high yields (105% treated, 78% untreated) and very bold grain (78.9 kg/hl). However, careful management is needed to get the best out of this variety as yellow rust resistance has been overcome.

Suitable for all regions and soil types with particularly good performance on lighter soils. Drill from the end of the last week of September right through to the end of January. It is an average second wheat. Straw is tall (94 cm) and not particularly stiff – treated (7) (6) and untreated (6) (4), so a decent PGR regime will be needed to achieve the high yields. Medium maturity (+1) (+3).

Disease scores are a bit of a mixed bag with mildew (6), yellow rust (4.7) (3.2), brown rust (5.5) (5.0), good *Septoria tritici* (6.4) (7.2) and moderately resistant to fusarium ear blight (6.8). Resistant to orange wheat blossom midge.

BREEDER: SYNGENTA UK LTD

PARENTAGE: (HEREFORD X OAKLEY) X HEREFORD



NOTE: Numbers in red – Agrii Advisory List data. Numbers in black – AHDB Recommended List data.



DISEASE RESILIENCE (2022)

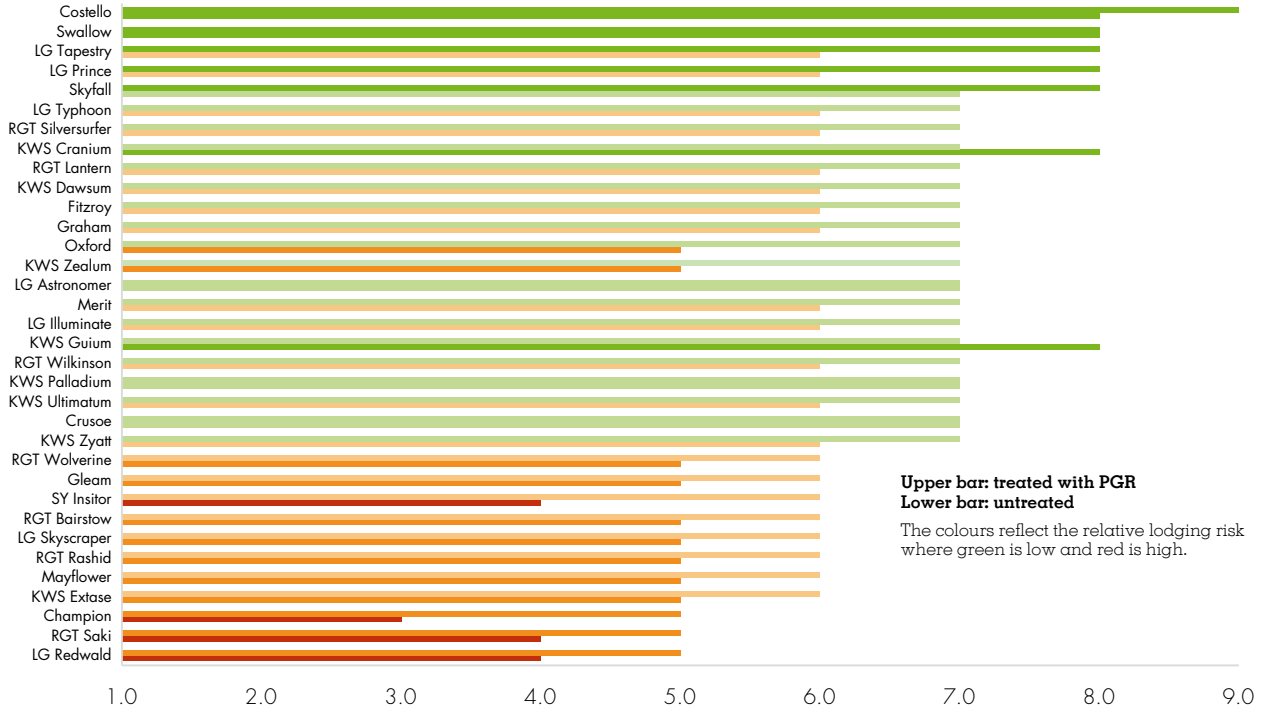
Yield Lost to Foliar Disease (t/ha) – five sites



Source: Difference between treated and untreated yields from five trials (Kent, South Wales, East Yorks, Angus and Essex).






WINTER WHEAT VARIETIES AGRII TREATED AND UNTREATED LODGING RATINGS



Source: Mean of Agrii dedicated lodging trials over more than one year. **Lodging Ratings (1-9 score where 9 = best).**



WINTER WHEAT NPKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
1st Dose	 Agrii-Start Replenish	350	60	40	79	39
2nd Dose	 Agrii-Start Enhance	150	69	0	0	0
3rd Dose	 Agrii-Start Enhance	150	69	0	0	0
Total kgs/ha			198	40	79	39



Agrii-Start Replenish




Developed specifically for use across all cereals to fulfil nitrogen, phosphorus, potassium and sulphur requirements in one pass.



Agrii-Start Enhance

Enhance Granular Urea is Agrii's range of high quality granular N & NS fertilisers. Enhance is powered by Nutrisphere-N which stabilises the nitrogen and reduces the risks from volatilisation, leaching and nitrification.

WINTER WHEAT NKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
1st Dose	 Agrii-Start Nourish	345	60	0	81	50
2nd Dose	 Agrii-Start Enhance	150	69	0	0	0
3rd Dose	 Agrii-Start Enhance	150	69	0	0	0
Total kgs/ha			198	0	81	50



Agrii-Start Nourish

Agrii-Start Nourish NKS+ is a size matched formulation designed for broadcast systems up to 36m. The Enhance treated nitrogen reduces nitrogen losses. The product also reduces nitrous oxide losses and has a lower carbon footprint compared with other fertiliser combinations.

Nutrient rates are for guidance purposes only. For more info on nutrition, please speak to your local fertiliser product manager or email info@agrii.co.uk.

Late Autumn & Spring Wheat



Delaying drilling is one of the most important ways of reducing the competition from grassweeds and remains an important time to establish cereals after later harvest crops like potatoes, sugar beet and maize.

The varieties can then be ranked in order of yield (six trials over three years, drilled mid-November to late January).

YIELD

- + SY Insitor
- + Gleam
- + Graham
- + LG Skyscraper
- + KWS Cranium
- + KWS Extase
- + LG Astronomer

KWS Zyatt, Skyfall, KWS Extase, and KWS Palladium may offer additional premium opportunities for milling.

Skyfall has the benefit of a longer drilling window through to early March and appears to be less susceptible to ergot than true spring wheats.

Spring wheats can also be drilled in late autumn. Trials over the past three years suggest that these can yield at the level of true winter types. There is also evidence to suggest that they are best suited to heavier soils and their yields can drop away quickly on lighter or drought-prone soils.



KWS LADUM

GROUP 1, MILLING



The highest yielding milling spring wheat in both official trials (102%) and in an Agrii trial (110%) last year. It also has very bold grain (78.0 kg/hl). It is slightly shorter than Mulika (75 cm) with similar maturity. Its disease resistance is reasonable with mildew (7), yellow rust (6), brown rust (7) and *Septoria tritici* (7) but, unlike Mulika and Nissaba, it is not resistant to orange wheat blossom midge.

BREEDER: KWS UK

PARENTAGE: KWS SYWELL X KWS TALLAND



NISSABA NEW

GROUP 1, MILLING



Nissaba is a Group 1 spring milling wheat and a new addition to the 2022-23 Recommended List. In AHDB trials it is higher yielding than Mulika when drilled in the autumn (97%) but similar when spring sown (94%). It has reasonable grain quality (76.4 kg/hl) but not quite as bold as Mulika (77.0 kg/hl). However, in a spring-drilled Agrii trial last year, it out-performed Mulika by 10% and had slightly bolder grain.

Consistent performance across the past three seasons in official trials. It has a similar height (77 cm) to Mulika but is slightly later to mature (+2). Nissaba's disease resistance is similar to Mulika with brown rust (9), *Septoria tritici* (6) but it is weaker against mildew (5) and yellow rust (5). It is important to remember that these scores are from spring-drillings and they are likely to be lower if it is drilled in late autumn. Resistant to orange wheat blossom midge.

BREEDER: BLACKMAN AGRICULTURE (UK)

UK AGENT: SENOVA

PARENTAGE: PREMIO X MULIKA X W45



LATE AUTUMN AND SPRING WHEAT

MULIKA

GROUP 1, MILLING



A Group 1 spring milling wheat with a lower than average yield (95%). It produces tall straw (79 cm) and a full PGR programme is advisable, especially on fertile land. Average disease resistance with *Septoria tritici* (7), brown rust (9), mildew (6) and yellow rust (6). Resistant to orange wheat blossom midge.

BREEDER:	BLACKMAN AGRICULTURE (UK)
UK AGENT:	SENOVA
PARENTAGE:	PARAGON X (TYBALT X ROBIGUS)

KWS COCHISE

GROUP 2, MILLING



A consistently high yielding Group 2 variety with a 7% yield advantage over Mulika in Agrii trials. Excellent physical grain quality (78.6 kg/hl) but lower than average Hagberg Falling Number (250s). Similar in height (78 cm) to Mulika and similar maturity (+1). It is very susceptible to yellow rust (4) but is resistant to orange wheat blossom midge.

BREEDER:	KWS UK
PARENTAGE:	ASHBY X LAPIS

HEXHAM

HARD FEED



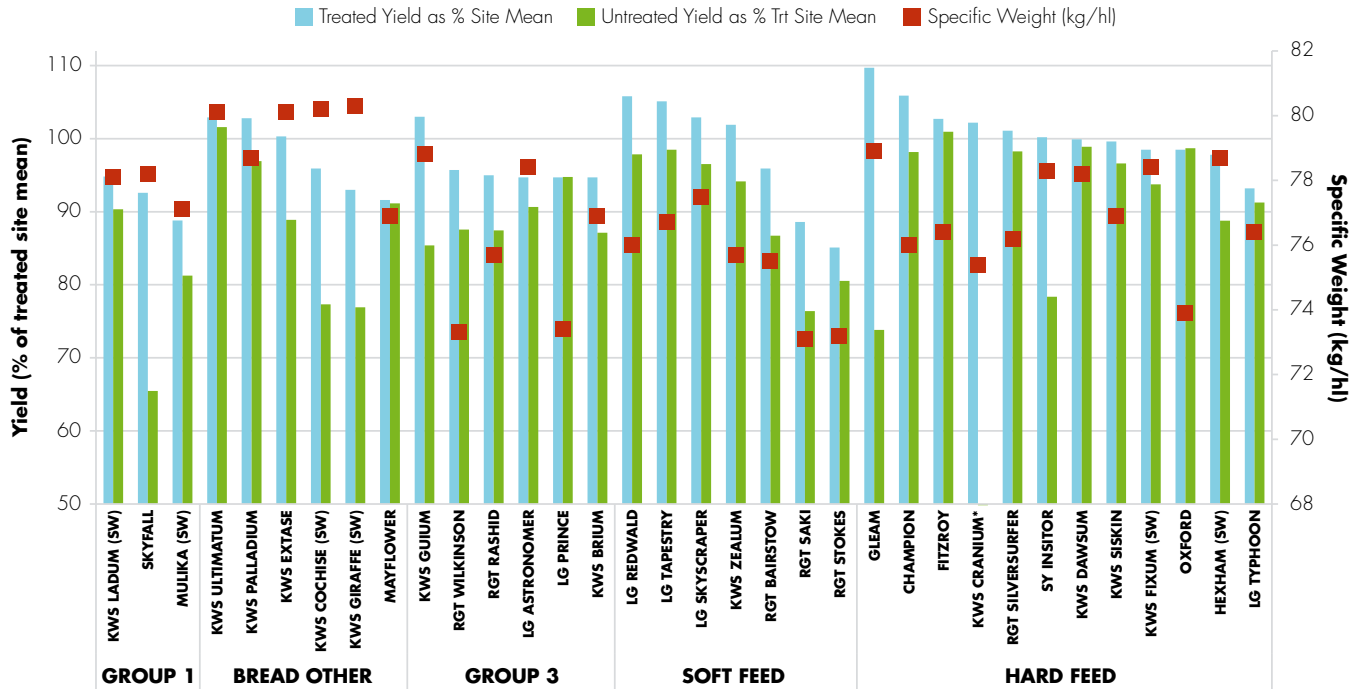
Hexham was the highest yielding spring sown wheat (110%) in Agrii trials over the past three years and has reasonable grain quality (77.1 kg/hl in AHDB trials). Relatively tall (78 cm), stiff straw and slightly later maturity (+2). Excellent disease resistance with good ratings for yellow rust (8), brown rust (9), mildew (6) and *Septoria tritici* (7) but not resistant to orange wheat blossom midge.

BREEDER:	KWS UK
UK AGENT:	SENOVA
PARENTAGE:	KWS WESTFIELD X KWS FLINT





LATE AUTUMN WHEAT VARIETY TRIALS – 2022 (HEAVY LAND) REVESBY



Source: Agrii trial at Revesby, Lincs. Drilled 24/11/2021. Mean control yield = 9.1 t/ha (*untreated yield not available).

Winter Barley

HYBRID BARLEY 6-ROW FEED

SY ARMADILLO

BELFRY

SY KINGSBARN

SY THUNDERBOLT **NEW**

BARLEY YELLOW DWARF VIRUS (BYDV) TOLERANT VARIETIES

KWS FEERIS

2-ROW FEED

KWS TARDIS

MEMENTO

LG CARAVELLE **NEW**

BOLIVIA **NEW**

CALIFORNIA

2-ROW MALTING

CRAFT



WINTER
WHEAT

WINTER
BARLEY

HYBRID
RYE

WINTER
OATS

WINTER
OILSEED

WINTER
BEANS

FARM
SAVED SEED

SEED
TREATMENTS

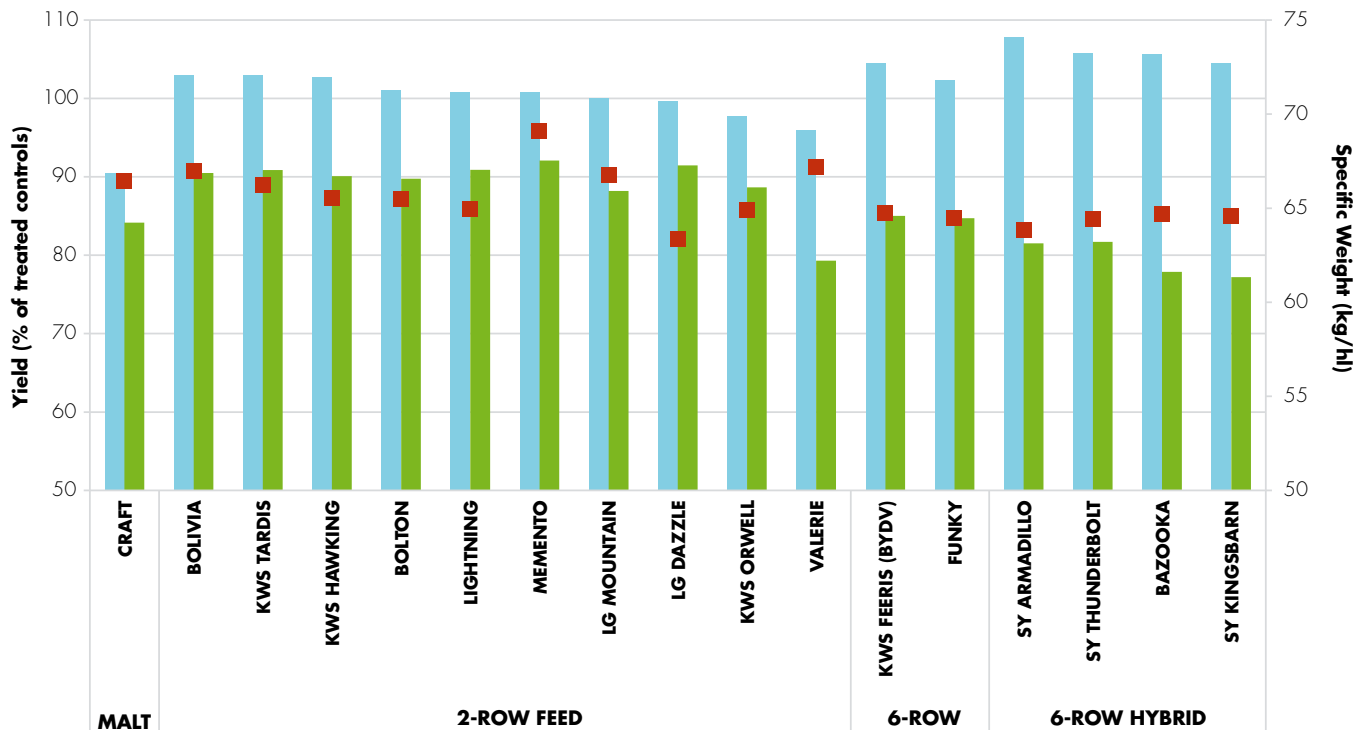
MAIZE
ROOT &
COVER CROPS

APPENDIX



AGRII WINTER BARLEY VARIETY TRIALS – 2 YEAR SUMMARY

■ Treated Yield (% of Controls) ■ Untreated Yield (% of Controls) ■ Specific Weight (kg/hl)



Source: Mean of twelve trials over two years. Mean yield = 8.9 t/ha.



SY ARMADILLO

HYBRID BARLEY, 6-ROW FEED **HIGH VSR**

- + **A non-Recommended List hybrid with high yields and excellent specific weight**
- + **Relatively stiff straw, very low brackling and good all-round disease resistance**

High yields (**108% treated, 82% treated**) over the past two years in Agrii trials with an excellent specific weight (**68.4 kg/hl**) and a good variety to sit alongside Belfry.

Suitable for all regions of the UK, all soil types and best drilled in the main drilling window through to the middle of October. SY Armadillo has excelled on light land and, like all hybrid barley varieties, it is very competitive against grassweeds.

Tall (**107 cm treated, 115 cm untreated**) and relatively stiff (7) so this will be attractive to growers who have struggled to keep their hybrids standing. Armadillo has also shown outstanding brackling resistance and far better than from any other hybrids. A robust PGR programme is still recommended. Medium maturity, similar to Belfry.

A strong combination of wet weather disease resistance, it has good ratings for mildew (5), *Rhynchosporium* (7), net blotch (6) but brown rust (4) needs watching. Resistant to barley yellow mosaic virus.

BREEDER: SYNGENTA UK LTD

BELFRY

HYBRID BARLEY, 6-ROW FEED **HIGH VSR**

- + **Very high yields, less bulk and ideal for heavy land**
- + **Improved standing, disease resistance and relatively easy to grow**

Agrii's preferred hybrid barley variety for heavy land due to its sensible height and stiff straw, while only being a couple of percent behind the leading varieties in terms of yield. Consistently high yielding over the past three years in Agrii trials (**102% treated, 82% untreated**) and a reasonable specific weight (**69.7 kg/hl**).

It performs consistently well across all regions and soil types. High-tillering capacity with a semi-prostrate growth habit, it is very competitive against blackgrass. Drill from 20th September through to the end of October and, like the other hybrids, it is best used to maintain already low weed populations. It is the shortest (**109 cm treated, 102 cm untreated**) and stiffest (7) of any of the hybrids. Medium maturity.

Good all-round disease resistance against mildew (6) (6), brown rust (6) (5), *Rhynchosporium* (7) (7) and net blotch (5) (6). Resistant to barley yellow mosaic virus.

BREEDER: SYNGENTA UK LTD





SY KINGSBARN

HYBRID BARLEY, 6-ROW FEED **MEDIUM VSR**

- + Very high output hybrid barley
- + Highest specific weight and lowest screenings of any 6-row type

This has become a very popular hybrid across the UK. High yields (**104% treated, 80% untreated**) in Agrii trials over the past three years. It also has the lowest screening losses of any 6-row type in official trials and a high specific weight (**70.9 kg/hl**). Ideal for use on lower potential sites, lighter soils, situations where grassweeds are a problem and increasingly used for anaerobic digestion.

Very stable performance across all regions and soil types. Best drilled from late September through to mid-October. Very competitive against grassweeds. Tall straw (**111 cm untreated, 104 cm treated**). Stem stiffness is on the low side (**7 treated, 6 untreated**) and it is still prone to lodging even after a robust PGR programme. It has a higher lodging risk than both SY Armadillo and Belfry. Medium maturity (0).

Good disease resistance with mildew (7) (6) and net blotch (5) (7), *Rhynchosporium* (6) (7), but weak against brown rust (5) (4). Resistant to barley yellow mosaic virus.

BREEDER: SYNGENTA UK LTD

SY THUNDERBOLT NEW

HYBRID BARLEY, 6-ROW FEED **HIGH VSR**

- + Very high yields in Agrii trials
- + Improved disease resistance

The highest yielding hybrid in Agrii trials (**106% treated, 82% untreated**) over the past two years. In official trials it sits at the same yield level as SY Kingsbarn with a similar good specific weight (**70.9 kg/hl**). In many respects it is similar to SY Kingsbarn but with slightly better disease resistance. However, its higher lodging scores may limit interest unless it can find a niche, for example, on lighter land or in less fertile situations.

Best performance has been in the East and West regions. Similar in height to SY Kingsbarn (**111 cm untreated, 104 cm treated**) but it is the weakest of all of the hybrids (**5 treated, 5 untreated**). Good resistance to mildew (7) (7), brown rust (6) (5), *Rhynchosporium* (6) (7) and net blotch (6) (6). Resistant to barley yellow mosaic virus.

BREEDER: SYNGENTA UK LTD

(Image: Jim Carswell)

NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



BARLEY YELLOW DWARF VIRUS (BYDV)

Barley Yellow Dwarf Virus (BYDV) is a widely distributed viral disease of cereals and affects wheat, barley and oats.

The virus is transmitted by aphids and replicates once in the plant, leading to a number of symptoms including yellowing or reddening of leaves, stunting, delayed or no heading and a reduction in yield.

Insecticide sprays and the neonicotinoid seed treatments have been used to control the aphid vectors in the past to reduce the incidence and severity of the disease.

In recent years, the plant breeders have successfully bred varieties that are resistant to the virus (i.e. it does not replicate within the plant) or tolerant (i.e. the plant is less/not affected by the virus).

Traits are available in both winter wheat and barley.

KWS FEERIS

6-ROW FEED, BYDV TOLERANCE **HIGH VSR**

A conventional 6-row variety with the added benefit of BYDV tolerance. Tolerance allows growers to reduce insecticide use or better protect yield in high-risk situations. Yielding at the same level as SY Kingsbarn and Belfry over the past three years (**105% treated, 79% untreated**) with average specific weight (**69.8 kg/hl**) and low screening losses. BSPB Trait Protection Scheme means a slight increase in royalty for the trait and follows a different approach to the BIPO scheme.

Suitable for the South, West, North and other areas where BYDV is a significant problem, KWS Feeris can be grown on any soil type but it performs better on heavier soils. Not as tall as other hybrids (**95 cm treated, 100 cm untreated**), moderately stiff straw (7) and lower lodging risk. Average competitiveness against grassweeds and medium-late maturity. Good resistance to net blotch (5.6) (7) and *Rhynchosporium* (5.6) (7) but weak against mildew (4.3) (4) and brown rust (5.8) (4). Resistant to barley yellow mosaic virus.

BREEDER: KWS UK

PARENTAGE: AMISTAR X KWS KOSMOS



NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



KWS TARDIS

2-ROW FEED **MEDIUM VSR**



- + One of the highest yielding 2-row varieties on the Recommended List
- + Tall with stiff straw but disease resistance package is mixed

Pushed off the top spot on the UK Recommended List by newer varieties but remains the market leader, at least for the time being. It has produced consistently high yields in Agrii trials (102% treated, 89% untreated) over the past three years with an average specific weight (70.6 kg/hl).

Suitable for all regions and soils with particularly strong performance on heavy soils (107%) in official trials. Medium height (85 cm treated, 95 cm untreated), stiff straw (8 treated, 8 untreated) and medium-early maturity (0). Like most 2-rows, KWS Tardis has shown relatively poor grassweed competitiveness in Stow Longa trials.

Average disease resistance against mildew (5) (5), *Rhynchosporium* (6) (6), net blotch (5) (5) and brown rust (6) (5). Resistant to barley yellow mosaic virus.

BREEDER:	KWS UK
PARENTAGE:	11-12 X KWS ORWELL

MEMENTO

2-ROW FEED **MEDIUM VSR**



- + Consistent high yields
- + The boldest grain of any variety

Agrii's biggest selling 2-row barley after KWS Tardis, it effectively replaced Cassia as the variety with the boldest sample. High yields (99% treated, 89% untreated) in Agrii trials over the past three years, in line with KWS Orwell. It has consistently achieved higher specific weights than any other variety over that period.

Suitable for all regions and soils with particular appeal to growers in the West and North who have come to expect big bold grain. Low competitiveness against blackgrass compared with California but similar to KWS Tardis and KWS Orwell.

Average height (86 cm treated, 93 cm untreated), moderately stiff straw and medium-late maturity. Good resistance to brown rust (6), *Rhynchosporium* (7) and net blotch (6) but susceptible to mildew (3). Resistant to barley yellow mosaic virus.

BREEDER:	SECOBRA, FRANCE
UK AGENT:	AGRII
PARENTAGE:	BASILIC X KWS CASSIA

LG CARAVELLE NEW

2-ROW FEED **HIGH VSR**

- + The highest yielding 2-row barley on the UK Recommended List
- + Excellent grain quality and grassweed competitiveness

Top of the UK Recommended List in terms of yield and similar strong performance in Agrii trials (102% treated, 91% untreated) in 2022. It also has the boldest grain (71.8 kg/hl, AHDB) of any of the newer varieties. It looks to be a promising variety that combines the genetics of two of the most successful barley breeders over the past few years, KWS and Limagrain.

Consistent across all soils and regions with particularly strong performance in the East (109%). Agronomically, it is sound with an average height (85 cm treated, 93 cm untreated), reasonably stiff (7), medium lodging risk and mid-maturity (0). Early indications suggest that it has a better grassweed competitiveness than most other 2-row barley varieties. Disease resistance also looks promising with mildew (7) (7), brown rust (6), *Rhynchosporium* (6) and net blotch (5). Resistant to barley yellow mosaic virus.

BREEDER:	LIMAGRAIN
PARENTAGE:	KWS MOSELLE X LGBU11-6103-C



BOLIVIA NEW

2-ROW FEED **HIGH VSR**

Bolivia sits on the UK Recommended List just behind LG Caravelle with consistently high yields (**104% treated, 89% untreated**) and an average specific weight (**70.2 kg/hl**). It has also performed well in Agrii trials over the past two years (**103% treated, 90% untreated**). It has one of the lowest screening losses.

Consistent performance across regions and soil types. It is moderately tall (**91 cm untreated, 89 cm treated**), with stiff straw (8), lower lodging risk and average brackling risk. Bolivia's grassweed competitiveness is not as good as LG Caravelle or California and similar to other 2-row types. Disease resistance is good with mildew (7.4) (7), brown rust (7), *Rhynchosporium* (5.8) (5) and net blotch (6.4) (5). Resistant to barley yellow mosaic virus.

BREEDER: NORDIC SEEDS**UK AGENT:** AGRII**PARENTAGE:** NOS 9901-14 X FRIGG

CALIFORNIA

2-ROW FEED **MEDIUM VSR**

Continues to meet the requirements of the feed barley grower with its combination of high grain yield (**98%**), good all-round disease resistance and good grain quality (**69.1 kg/hl**). Grown mainly in the West, it performs best on heavier soils and it is the only 2-row feed that is suitable for early-September drilling. Reasonably competitive against grassweeds.

Tall (**99 cm treated, 96 cm, untreated**) but stiff straw (8) and medium maturity. Reasonable resistance to mildew (6) (6) and net blotch (5) (6) and *Rhynchosporium* (6) (5) but susceptible to brown rust (6) (3). Resistant to barley yellow mosaic virus.

BREEDER: LIMAGRAIN UK**PARENTAGE:** CANTARE X CELEBRITY

CRAFT

2-ROW MALTING **MEDIUM VSR**




Remains the UK's number one winter malting barley with full MBC approval. Performs consistently in Agrii trials with high treated (**93%**) and untreated (**83%**) yields and good specific weight (**70.7 kg/hl**). Preferred by the maltsters for its relatively high malt extract (**308 l deg/kg**) and low grain nitrogen (**1.67%**). Performs best on lighter soils (**97%**).

Moderately tall (**89 cm treated, 96 cm untreated**) with medium risk of lodging (7 **untreated, 8 treated**) and medium maturity. Relatively good disease resistance against mildew (6) (6), brown rust (7) (6), *Rhynchosporium* (6) (6) and net blotch (5) (6). Resistant to barley yellow mosaic virus.




BREEDER: SYNGENTA UK LTD**PARENTAGE:** SY 208-56 X SY VENTURE



WINTER BARLEY NPKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
1st Dose	 Agrii-Start Replenish	350	60	40	79	39
2nd Dose	 Agrii-Start Enhance	150	69	0	0	0
3rd Dose	 Agrii-Start Enhance	150	69	0	0	0
Total kgs/ha			198	40	79	39

WINTER BARLEY NKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
1st Dose	 Agrii-Start Nourish	345	60	0	81	50
2nd Dose	 Agrii-Start Enhance	150	69	0	0	0
3rd Dose	 Agrii-Start Enhance	150	69	0	0	0
Total kgs/ha			198	0	81	50



Agrii-Start Replenish

Developed specifically for use across all cereals to fulfil nitrogen, phosphorus, potassium and sulphur requirements in one pass.



Agrii-Start Enhance

Enhance Granular Urea is Agrii's range of high quality granular N & NS fertilisers. Enhance is powered by Nutrisphere-N which stabilises the nitrogen and reduces the risks from volatilisation, leaching and nitrification.



Agrii-Start Nourish

Agrii-Start Nourish NKS+ is a size matched formulation designed for broadcast systems up to 36m. The Enhance treated nitrogen reduces nitrogen losses. The product also reduces nitrous oxide losses and has a lower carbon footprint compared with other fertiliser combinations.

Nutrient rates are for guidance purposes only. For more info on nutrition, please speak to your local fertiliser product manager or email info@agrii.co.uk.

Hybrid Rye

Agrii offers an extensive understanding of rye production throughout the UK. Whether rye is being grown as wholecrop for AD or indeed for grain for livestock production, we are able to supply growers with unrivalled expertise when it comes to maximising returns from their rye crops.

This knowledge and technical advice comes directly from the intensive trials and screening programmes that Agrii carries out every year.

With sites throughout the UK, Agrii has been able to produce best practice recommendations for both variety choice and crop management.

Grain rye feeding trials

In 2019, a collaborative pig feeding trial between Elsoms Seeds, Harbro Feeds and Agrii was conducted at Leeds University. The feeding trial assessed varying levels of grain rye inclusion fed to controlled and monitored batches of pigs at the University Farm. The significant findings from the feeding trial have enabled Agrii to maintain an extensive understanding of how the crop is best utilised once harvested and the required quality traits from varieties.

Agrii conducted further feeding trials in 2022, this time evaluating the results of grain rye fed to beef cattle in the UK. Please get in touch for more information on any of our trials work or collaborative projects.



Growing rye within a rotation can offer several benefits...

- + **An alternative to winter barley**
- + **Offers a good blackgrass control option**
- + **A more economical alternative to second wheat**
- + **Reduced fertiliser, herbicide and fungicide requirements**
- + **Drought tolerance**
- + **+ 2 tonnes of straw per hectare when compared to wheat**
- + **High tillering ability**
- + **Very competitive against grassweeds**

KWS IGOR

- + Highly impressive and new grain variety from KWS
- + Identified within Agrii trials as the highest yielding for grain
- + Good all-round agronomics
- + Very good vigour throughout the autumn and spring
- + Benefits from KWS Pollen Plus genetics

BREEDER: KWS, GERMANY

HELLTOP

- + Suitable for both wholecrop and grain production
- + Constantly outperforms other varieties in Agrii trials
- + Well proven throughout the UK and Europe
- + The most vigorous hybrid throughout the autumn and spring
- + Very stiff straw with good rust resistance
- + Improved feed quality when compared to other hybrids

BREEDER: NORDIC SEED, DENMARK

UK AGENT: AGRII

ASTRANOS

- + Suitable for both wholecrop and grain production
- + Identified as a successor or partner to Helltop within Agrii trials
- + Significant following throughout Europe
- + Equal vigour to Helltop throughout the autumn and spring
- + Very stiff straw with good rust resistance
- + Produces significant levels of high quality biomass

BREEDER: NORDIC SEED, DENMARK

SU BENDIX

- + Suitable for early drilling
- + Very reliable grain variety
- + Exceptional grain quality
- + Ideal for incorporating into feed rations
- + Suitable for all regions of the UK
- + Good all-round agronomics

BREEDER: SAATEN UNION


UK AGENT: AGRII

**RESERVED
RYE SEED
AVAILABLE**



(please see page 86
for more details)



HYBRID RYE NPKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Agrii-Start Replenish	350	60	40	79	39
Top Dress	 Agrii-Start Enhance	100	46	0	0	0
Total kgs/ha			106	40	79	39

HYBRID RYE NKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Agrii-Start Nourish	345	60	0	81	50
Top Dress	 Agrii-Start Enhance	100	46	0	0	0
Total kgs/ha			106	0	81	50



Agrii-Start Replenish

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Nutrient rates are for guidance purposes only. For more info on nutrition, please speak to your local fertiliser product manager or email info@agrii.co.uk.

Winter Oats

HUSKED VARIETIES

MASCANI
CROMWELL
GERALD
DALGUISE

NAKED VARIETIES

GRAFTON
FUSION
PELTON



WINTER
WHEAT

WINTER
BARLEY

HYBRID
RYE

WINTER
OATS

WINTER
OILSEED

WINTER
BEANS

FARM
SAVED SEED

SEED
TREATMENTS

MAIZE
ROOT &
COVER CROPS

APPENDIX



Oats are a white straw break crop and as such can be used as a common Take-all break. They are adaptable and can tolerate soil pH down to 5.3.

Current best practice is to not grow oats more than one year in four to reduce the potential incidence of oat mosaic virus and stem eelworm.

To obtain maximum value of the crop, growing on a milling contract is crucial.

Please talk with your local Agrii or Viterra UK Ltd representative about availability of milling oat contracts.

MASCANI

Still the market leading variety driven by end-users. Decent standing ability and acceptable maturity with a disease resistance package slightly better than others on the list. Good specific weight, best kernel content and best performance in the mill, shows why it's the preferred oat. With this need in the market, good value contracts will be available.

BREEDER:	INSTITUTE OF BIOLOGICAL, ENVIRONMENTAL AND RURAL SCIENCES
UK AGENT:	SENOVA

CROMWELL

Currently yielding near the top of the list with the best specific weight and average screenings. Short straw and stiff but watch out for mildew. Milling potential seems good with kernel content only marginally behind Mascani and early tests showing promise. We are working with end-users to fully understand the potential of this line.

BREEDER:	INSTITUTE OF BIOLOGICAL, ENVIRONMENTAL AND RURAL SCIENCES
UK AGENT:	SENOVA

OTHER VARIETIES TO CONSIDER

Dalguise yields in the middle of the pack and has good specific weight with decent kernel content. It is also early maturing, but straw and disease will need looking after.

Gerald's yields are a bit behind the rest now. With moderate grain characteristics, later maturity and susceptibility to mildew this should only be grown where success has been had before.

BREEDER:	INSTITUTE OF BIOLOGICAL, ENVIRONMENTAL AND RURAL SCIENCES
UK AGENT:	SENOVA





BENEFITS OF WINTER NAKED OATS

Naked oats have the same agronomic benefits as husked oats. However, naked oats naturally thresh free from the husk during harvest, producing a nutrient dense natural groat with high digestible energy.

In comparison to spring naked oats, an established winter crop is more tolerant of spring droughts and has the potential to produce greater yields.

Our naked oats are grown on an exclusive buy-back contract and marketed through our **Superioats** brand with **GB Seeds**.

GRAFTON

Grafton is a popular older naked oat variety. It is early maturing with good specific weight and low screenings. A PGR programme is required as it is tall with moderate straw strength. Grafton is susceptible to mildew and average for crown rust, which can be effectively managed with a decent agronomic package.

BREEDER:	INSTITUTE OF BIOLOGICAL, ENVIRONMENTAL AND RURAL SCIENCES
UK AGENT:	SENOVA

FUSION

Fusion has proved to be a high yielding semi-dwarf variety. A PGR programme is not required due to its short stiff straw, and it is a good variety choice for areas where lodging is a high risk. Fusion is susceptible to both mildew and crown rust; a robust fungicide programme is recommended.

BREEDER:	INSTITUTE OF BIOLOGICAL, ENVIRONMENTAL AND RURAL SCIENCES
UK AGENT:	SENOVA

PELTON

Peloton is a newer variety in the naked oat market and sits as the highest yielding of winter varieties. It has a good specific weight and low screenings. Peloton has moderate height and is stiff-strawed, maturity is marginally later than Grafton. With good resistance to mildew and crown rust it is a relatively easy variety to manage.

BREEDER:	INSTITUTE OF BIOLOGICAL, ENVIRONMENTAL AND RURAL SCIENCES
UK AGENT:	SENOVA



GB Seeds
seeds of excellence



Winter Oilseed Rape

HYBRID

TURING **NEW**

AMBASSADOR

LG AUCKLAND

InV1035

TENNYSON (PRIMED SEED)

RGT KANZZAS **NEW**

DK EXSTEEL

CONVENTIONAL

AMARONE

AARDVARK

CLEARFIELD

MATRIX CL

InV1266 CL

CLUBROOT

LG ANARION

CROME

HOLL

V367OL

HEAR

ROCCA



WINTER
WHEAT

WINTER
BARLEY

HYBRID
RYE

WINTER
OATS

WINTER
OILSEED

WINTER
BEANS

FARM
SAVED SEED

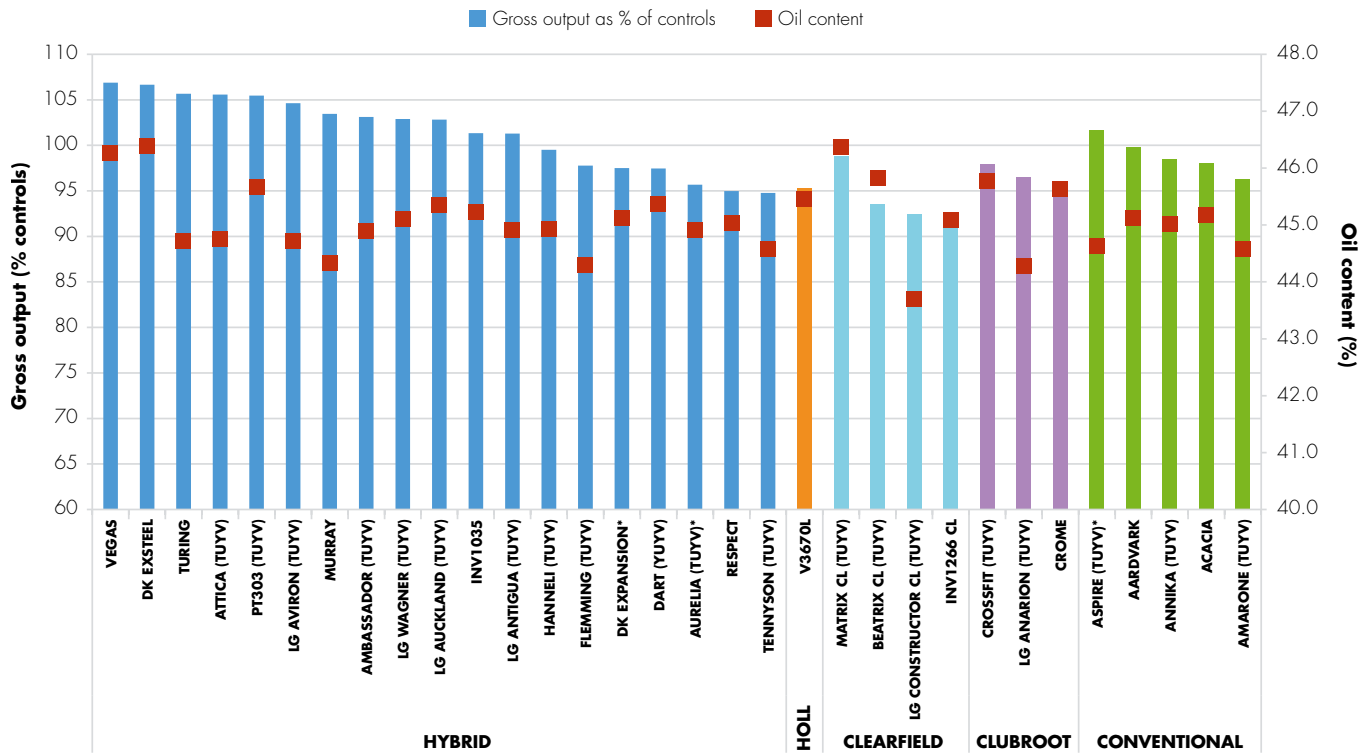
SEED
TREATMENTS

MAIZE
ROOT &
COVER CROPS

APPENDIX



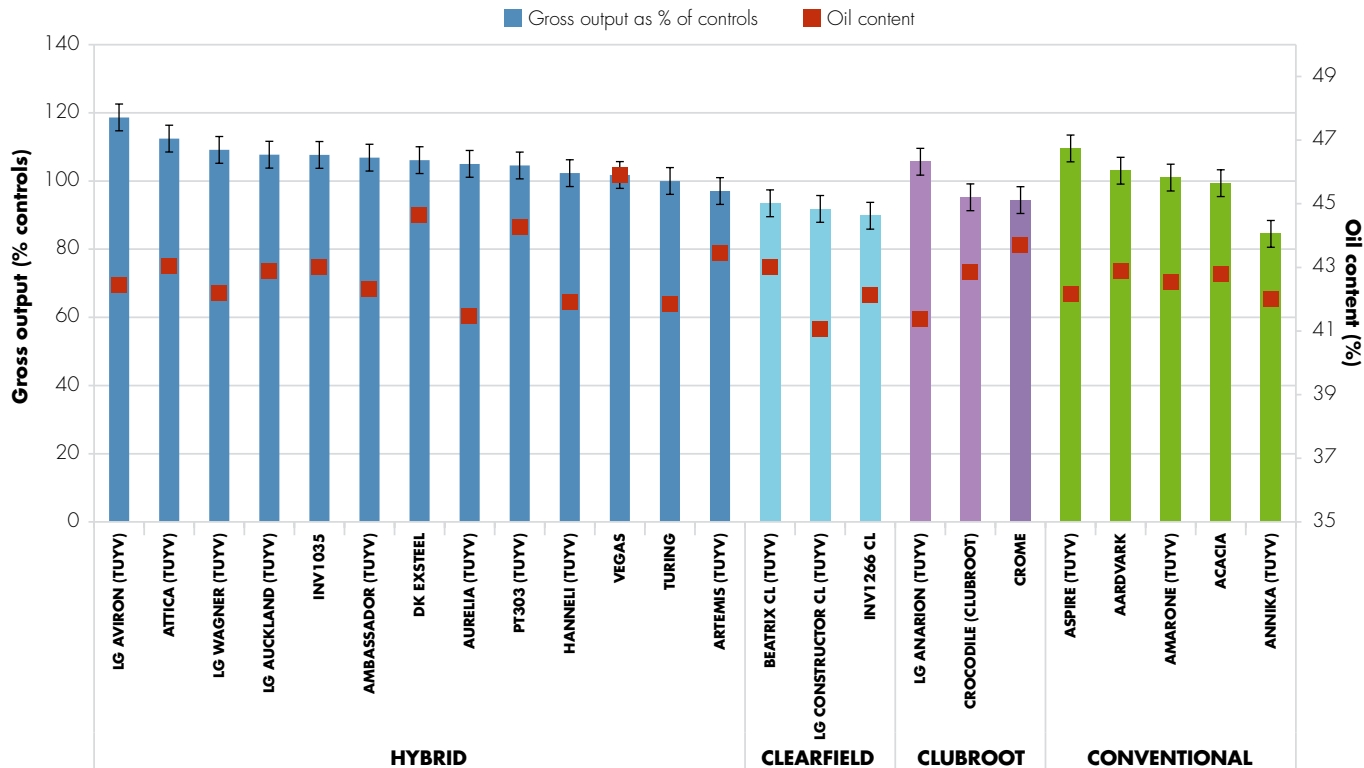
AGRII WOSR VARIETIES – 2022 NATIONAL TRIALS GROSS OUTPUT AS % OF CONTROLS (MEAN OF 4 SITES)



Source: Four trials (South Wales, Wiltshire, East Yorkshire and Kinross). Mean control* gross output = 4.9 t/ha.



AGRII WOSR TRIAL – KINROSS, SCOTLAND, 2022



Source: Agrii replicated trial No 22206. Mean gross output = 4.1 t/ha.



TURING NEW

HYBRID OILSEED RAPE – UK-WIDE **MEDIUM VSR**

- + **Top-level high gross output hybrid**
- + **Excellent disease profile especially against *Verticillium* stem stripe**

A new addition to the UK Recommended List and sits joint-top in terms of gross output (107%) alongside the new Limagrain hybrid, Attica. It also performed well in Agrii trials last year (106% treated, 101% untreated) and has a high oil content (44.7%). It achieves consistently high yields in spite of it not having the TuYV resistance trait that is now widely deployed by other breeders.

Suitable for all soils and regions of the UK. It has a fast speed of development in the autumn (8) and is relatively early to grow away in the spring (8). It produces a relatively compact canopy (145 cm), very stiff (8) (9) and has medium maturity (5) (5).

Disease resistance includes a robust light leaf spot rating (7) (9) and RLM7 stem canker resistance (5). It has excellent tolerance to *Verticillium* wilt (7) with noticeably much greener stems compared with many other varieties late in the season, which is where the extra yield comes from. It does not have the pod shatter or TuYV resistance traits.

BREEDER: NPZ GERMANY**UK AGENT:** LSPB UK

AMBASSADOR

HYBRID OILSEED RAPE (TUUV RESISTANT) – UK-WIDE **HIGH VSR**

- + **High gross output hybrid**
- + **Robust disease profile including Turnip Yellow Virus (TuYV) resistance**

Agrii's biggest selling variety, proving popular over the past few years with its high consistent yield and strong traits package. It continues to perform well on-farm and has produced high yields (106% treated, 95% untreated) and a good oil content (44.7%) in Agrii trials over the past three years. It has become the go-to variety for many growers.

There is no doubt that the trait conferring resistance to Turnip Yellow Virus is delivering a significant lift in yield of about 7%. Suitable for all soils and regions of the UK, indeed, it was the highest yielding variety in Scotland in 2019. Ideal for later drilling with a very fast speed of development in the autumn (8) and relatively early to grow away in the spring (8). The new N-Flex trait delivers improved nitrogen-use efficiency, especially in situations where nitrogen is limiting.

Average height (154 cm) with a stiff canopy (9). Disease resistance includes a robust light leaf spot rating (7) (8) and RLM7 stem canker resistance (7). It has average tolerance to *Verticillium* wilt (5) in terms of visible symptoms but continues to deliver consistently in spite of the disease, which may be attributed to the combination of the good pod shatter resistance trait and mid-early maturity (5).

BREEDER: LIMAGRAIN UK

NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



LG AUCKLAND

HYBRID OILSEED RAPE (TUUV RESISTANT)

– UK-WIDE **MEDIUM VSR**

- + Similar to Ambassador with high yields and virus resistance
- + Excellent disease profile with improved *Verticillium* stem stripe tolerance

One of the latest hybrids from Limagrain and tested over the past two years in Agrii trials where it has delivered very high yields (103% treated, 94% untreated) and high oils (45.3%). It is a step up from Ambassador in some areas with a slightly faster autumn growth habit (8), slightly quicker to grow away in the spring (8) and shows reduced symptoms of *Verticillium* stem stripe. In many other ways it is very similar to Ambassador and has quickly become Agrii's second biggest selling variety.

Suitable for all soils and regions of the UK for drilling from mid-August right through to mid-September. It has an average height (150 cm) and average stem stiffness (7) (5) so a robust PGR programme is advised. Avoid very fertile sites or very early drilling. It has mid-maturity (5).

Excellent all-round disease profiles including robust light leaf spot (7) (8) and RLM7 stem canker resistance (7). There is good evidence from the breeder and Agrii trials that is it less affected by *Verticillium* wilt (6) compared with Ambassador (5) with fewer pronounced symptoms. It also carries the trait for pod shatter resistance.

BREEDER: LIMAGRAIN UK

InV1035

HYBRID OILSEED RAPE – UK-WIDE **HIGH VSR**

- + High treated and untreated gross output
- + Fast vigorous growth habit in autumn and spring

A significant variety in the Agrii portfolio over the last few years, favoured for its consistently high treated gross output (101%), high untreated yields (94%) and a high oil content (45.2%) in Agrii trials. It has delivered high yields on-farm in spite of not having the TuYV resistance trait. It has been supported throughout by an innovative establishment programme to offset the risks of losses from cabbage stem flea beetle.

InV1035 is marketed under BASF's 'InVigor' brand to emphasise this important agronomic characteristic. Indeed, InV1035 has shown outstanding autumn vigour over the past six years of testing by Agrii. It has a fast, vigorous autumn growth habit (8) and early spring regrowth (8) which is useful against slugs, pigeons and cabbage stem flea beetle. Suitable for all regions of the UK and it can be grown across all soil types. Relatively short (149 cm) and a stiff canopy (8).

Very early maturity (8) and carries the pod shatter resistance trait. Its high untreated yields can be attributed to its excellent disease resistance profile which is hard to beat. It has one of the best disease resistance packages available with both RLM7 phoma/stem canker genetics (8) and an excellent light leaf spot (8) rating. It also shows good tolerance of *Verticillium* wilt (7).

BREEDER: BASF UK



TENNYSON (PRIMED SEED)

HYBRID OILSEED RAPE (TUYV RESISTANT)

– EAST & WEST **HIGH VSR**



- + A high gross output hybrid with TuYV resistance
- + Excellent disease profile, suitable for early drilling and available as 'Primed Seed'

Tennyson is the only variety available in the UK where the seed has been primed. This non-chemical process advances germination and improves crop establishment and is widely used by the beet and vegetable seed industry. Trials have shown that the benefits of priming can be seen well into the autumn and spring, and may result in yield benefit. While it is not the highest gross output variety (95% treated, 86% untreated and 45.24% oil), priming technology is particularly useful where cabbage stem flea beetle is a problem.

Tennyson has a fast autumn (8) and spring (8) growth habit, stiff canopy and outstanding disease resistance, which makes it a suitable variety for early drilling. Suitable for all soils and best suited to the East and West regions of the UK. It can be drilled from early August right through to early September. Relatively short (147 cm), good stem stiffness (7) (8), and medium-early maturity (5) (6).

Tennyson has a good light leaf spot rating (7) (8), excellent phoma/stem canker (9) resistance and good tolerance *Verticillium* wilt (7). It does not carry the trait for pod shatter resistance.

BREEDER: ELSOMS

RGT KANZZAS NEW

HYBRID OILSEED RAPE CANDIDATE

– EAST & WEST **NO VSR**

- + A new candidate with high yields and good autumn vigour
- + Outstanding resistance against light leaf spot

A new hybrid candidate that has performed well in official trials (106%, 44.7% oil) and is under test this year in Agrii trials where it has shown excellent crop vigour so far.

Suitable for all soil types and while it is under evaluation by the AHDB in the East and West regions, it is being tested by Agrii across the UK. Relatively tall (157 cm) but very good stem stiffness (8) and excellent lodging resistance (8) and relatively early maturity.

It has reasonable stem canker/phoma resistance (6) and excellent resistance against the more important and progressive disease, light leaf spot (8). The breeder does not claim either pod shatter or TuYV resistance but other varieties in the Agrii portfolio continue to perform at the top level without these traits. *Verticillium* wilt will be assessed this autumn.

BREEDER: RAGT



NOTE: Numbers in red – Agrii Advisory List data. Numbers in black – AHDB Recommended List data.

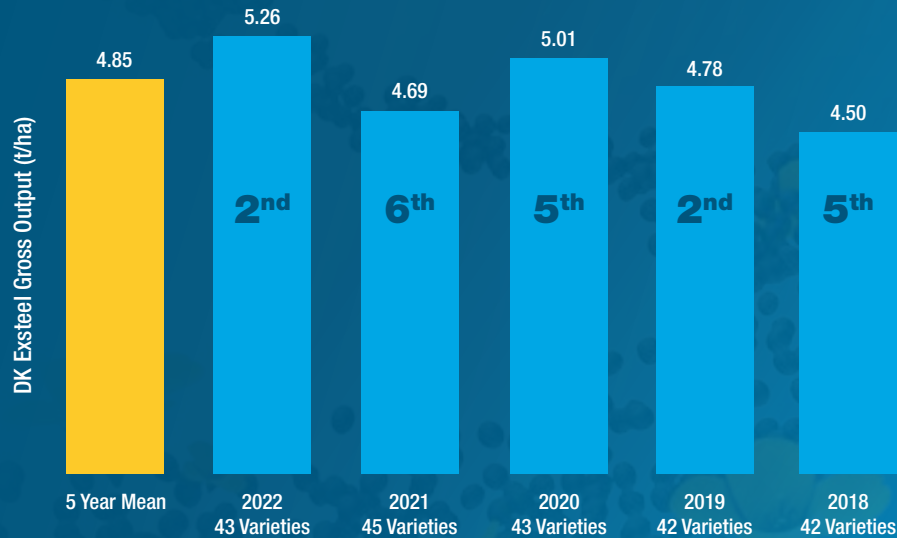
DK EXSTEEL

MR CONSISTENCY

Find out more:



Still performing near the top of Agrii national variety trials every year



PROVEN ALL-ROUND STRENGTH

- The single most consistent variety
- Outputs higher than almost any other
- Rapid autumn & spring development
- First class foliar disease resistance
- Good *verticillium* resistance
- Strong standing power
- Dekalb pod shatter resistance

THE RISK MANAGEMENT PROOF IS ALL IN THE GROWING





DK EXSTEEL

HYBRID OILSEED RAPE – UK-WIDE **HIGH VSR**

- + Remains one of the highest gross output hybrids in Agrii trials
- + Fast vigorous growth habit in the autumn and spring

One of the highest yielding varieties in Agrii trials every year for the past seven years, which is remarkable given that the variety doesn't have the advantage of the more recent TuYV trait. High gross output hybrid (107%), high untreated yields (94%) and a high oil content (46.4%) in spite of not having the TuYV trait.

Suitable for all soils and all regions. It has been proven in Agrii trials to perform across the UK especially in cabbage stem flea beetle affected areas because of its vigorous growth habit. Consistently one of the most vigorous hybrids in the autumn (8) and quick to move away in the spring (8). Trials have shown that it is one of the best varieties to cope with cabbage flea beetle larval infestations. This pest has not gone away and the vigorous growth habit of DK Exsteel remains a major advantage.

Tall (155 cm), stiff canopy (8) and medium maturity (5). Excellent disease resistance with light leaf spot (8) and RLM7 stem canker resistance (8) and good tolerance to *Verticillium* wilt (6). It also carries the pod shatter resistance trait. Not resistant to Turnip Yellows Virus.

BREEDER: BAYER CROP SCIENCE



WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE ROOT & COVER CROPS

APPENDIX



AMARONE

CONVENTIONAL OILSEED RAPE
WITH TUYV RESISTANCE – UK-WIDE

MEDIUM VSR



- + Agrii's biggest selling conventional variety with an excellent agronomy package
- + One of the few conventional varieties to carry the TuYV resistance trait

Amarone has a Northern AHDB Recommendation but it performed well across the UK in Agrii trials over the past three years (**95% treated, 45.6% oil**). From the same breeder as Aardvark, it has already been shown to have the best autumn vigour (**8.5**) of any of the conventional varieties in Agrii trials and has quickly become Agrii's most popular conventional variety.

Suitable for all soil types including more fertile situations. Relatively quick to grow away in the spring (**8**) to help mitigate against tough conditions and cabbage stem flea beetle attack for those who want to save their own seed. Relatively short (**145 cm**), an excellent stiff canopy (**8**) (**9**) and mid-maturity (**5**) (**5**).

Good all-round disease resistance with light leaf spot (**9**) and phoma/canker resistance (**6**). It shows average susceptibility to *Verticillium* wilt (**6**) but, in spite of showing some symptoms, it appears to yield consistently well and clearly benefits from the TuYV resistance trait.

BREEDER: LIMAGRAIN UK

AARDVARK

CONVENTIONAL OILSEED RAPE – EAST & WEST

MEDIUM VSR

- + High gross output conventional variety
- + Very rapid spring regrowth to help reduce cabbage stem flea beetle larval damage

Selected four years ago specifically for its ability to grow vigorously in the autumn and quickly away in the spring. This type of growth habit has proven to be the most effective way to cope with cabbage stem flea beetle larval infestations. Consistently high yields (**100% treated, 91% untreated, 45.1% oil**) in Agrii trials and excellent feedback on its on-farm performance.

Suitable for all areas of the UK and all soils including more fertile sites. Suits the main drilling window through to the end of the first week of September depending on soil conditions. Medium height (**148 cm**), excellent stem stiffness (**8**) and slightly later maturity (**4**). Good disease resistance against light leaf spot (**9**) and phoma/stem canker (**6**) and average tolerance of *Verticillium* stem stripe (**5**). Unlike Amarone, it does not carry the TuYV resistance trait.

BREEDER: LIMAGRAIN UK



NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



MATRIX CL



CLEARFIELD HYBRID OILSEED RAPE
– EAST & WEST **MEDIUM VSR**

- + A Clearfield hybrid, setting a new benchmark for very high yields
- + Strong agronomic package including TuYV resistance

Matrix CL has been a game-changer variety and has quickly established itself as the go-to variety for the Clearfield system. Tested by Agrii over the past three years, it has consistently high yields (99% treated, 88% untreated, 46.4% oil) making it 7% higher yielding than InV1266 CL. It comes with RLM7 phoma, TuYV and pod shatter resistance, which all contribute to its higher yields.

Its best performance is in the East and West regions, which are also the main markets for the technology. Suitable for all soil types. Relatively tall (158 cm), moderately stiff (8) (6) and early maturity (7) (6). Like most Clearfield varieties it has an average light leaf spot rating (6) (6) but has RLM7 phoma/canker resistance (8) and reasonable tolerance to *Verticillium* wilt (6).

BREEDER: DSV UK



InV1266 CL



CLEARFIELD HYBRID OILSEED RAPE – UK-WIDE **MEDIUM VSR**

- + A non-Recommended List Clearfield variety with exceptional spring vigour
- + Reasonable light leaf spot, good stem canker and pod shatter resistance

InV1266CL is Agrii's most popular Clearfield variety and it was identified three years ago for its stand-out autumn and spring vigour and suitability for areas at risk from cabbage stem flea beetle. Average yields (93% treated, 77% untreated) but high oil content (45.1%) in Agrii trials and it also performed well in a northern NIAB-TAG trials in 2021 (108%) where it outperformed all of the other Clearfield varieties including Matrix CL. This may have been due to its higher oil content and improved disease resistance.

Suitable for all soils but probably best grown no further north than Yorkshire. Its excellent crop vigour (8 autumn, 9 spring) complements the Clearfield System by providing early competition for difficult weeds and minimised CSFB damage. Average height (147 cm) with good stem stiffness (9) and mid-early maturity (6).

A significant step up in light leaf spot resistance (7) compared with Matrix CL (6) and has both the pod shatter trait and RLM7 phoma/stem canker (7) resistance.

BREEDER: BASF UK

NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.

WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE ROOT & COVER CROPS

APPENDIX



LG ANARION

CLUBROOT HYBRID OILSEED RAPE – UK-WIDE **MEDIUM VSR**

- + **Very high yields from improved genetics and TuYV resistance**
- + **Stiff canopy, good disease resistance and pod shatter resistance**

A non-Recommended List clubroot resistant variety with high yields (97% treated, 93% untreated, 44.3% oil). It is 2% higher yielding nationally than the UK market leader and 10% higher yielding in Scottish trials last year. This is why it has quickly become Agrii's most popular clubroot-resistant variety within two years.

Suitable for all regions of the UK. Excellent autumn (8) and spring vigour (8) in Agrii trials over the past three years and excellent winter hardiness was confirmed in Polish trials. It is quick to grow away in the spring and grows to be relatively tall (159 cm) with excellent standing ability (9) and mid-late maturity (4).

Good light leaf spot (8), RLM7 phoma/stem canker (6) and *Verticillium* stem stripe (6) resistance. It also incorporates the valuable pod shatter resistance trait which is now standard in all of the hybrids from Limagrain. Like all the clubroot varieties, LG Anarion should be used as part of an integrated approach using other cultural methods of control. Recommended for use on clubroot infected land only to help protect the longevity of this valuable genetic trait.

BREEDER: LIMAGRAIN UK

CROME

CLUBROOT HYBRID OILSEED RAPE – UK-WIDE **LOW VSR**

- + **High gross output clubroot variety**
- + **Stiff, good light leaf spot resistance and early maturity**

There continues to be strong demand for varieties with clubroot tolerance. This may reflect more cases of clubroot driven by the acidic soils in the North, stubble turnips in mixed farming areas or other brassicas in the rotation (e.g. in cover crops). Crome is valued for its consistent yield (95% treated, 78% untreated) with a very high oil content (45.6%).

It has a reasonable speed of development in the autumn (7) and grows away quickly in the spring (8). It is of moderate height (149 cm), with a stiff canopy (8) (9) and medium-late maturity (5) (4).

Reasonable light leaf spot resistance (7) (7) but weak against phoma/stem canker (4), so this needs to be monitored in the autumn and spring and sprayed for, as appropriate. Excellent tolerance of *Verticillium* wilt (7).

BREEDER: LS PLANT BREEDING, GERMANY



NOTE: Numbers in red – Agrii Advisory List data.
Numbers in black – AHDB Recommended List data.



V367OL **WE HOLL**

HOLL HYBRID OILSEED RAPE
– EAST, WEST & YORKSHIRE **LOW VSR**

- + **A HOLL variety for premium food-oil production**
- + **Improved autumn vigour and good all-round agronomic profile**

High Oleic, Low Linolenic (HOLL) oilseed rape varieties produce a more stable oil suitable for high temperature frying. V367OL is the number one HOLL variety in the Agrii portfolio with high gross output (95%) and good agronomic profile. Its good autumn vigour (7) and speed to grow away in the spring (8) are important characteristics that help it to cope with challenging growing conditions and reduce the effects of cabbage stem flea beetle, pigeons and slugs.

It is moderately tall (154 cm) but with good stem stiffness (9) and medium-late maturity (4). It has average phoma/stem canker resistance (5), reasonable light leaf spot resistance (6) and carries the pod shatter resistance trait.

BREEDER: BAYER CROP SCIENCE

ROCCA

HEAR HYBRID OILSEED RAPE – UK-WIDE **NO VSR**

- + **Agrii’s leading HEAR rape for industrial oil production**
- + **Ideal for the North with high vigour and good light leaf spot resistance**

Oil from High Erucic Acid Rapeseed (HEAR) has a variety of industrial applications. Rocca is Agrii’s leading HEAR variety, which has proven attractive, especially in the North, for its vigorous growth habit, improved light leaf spot resistance (7) and early maturity. Suitable for all soil types and best drilled in the main drilling window.

Medium height but it requires a robust PGR programme as it has only moderate stem stiffness. Average phoma/stem canker resistance, so monitor for this disease and spray as appropriate. If growers want to move back into ‘00’ or HOLL contracts in the future then ensure an appropriate gap between oilseed rape crops and consider using Clearfield oilseed rape.

BREEDER: PHYCOMAT, FRANCE

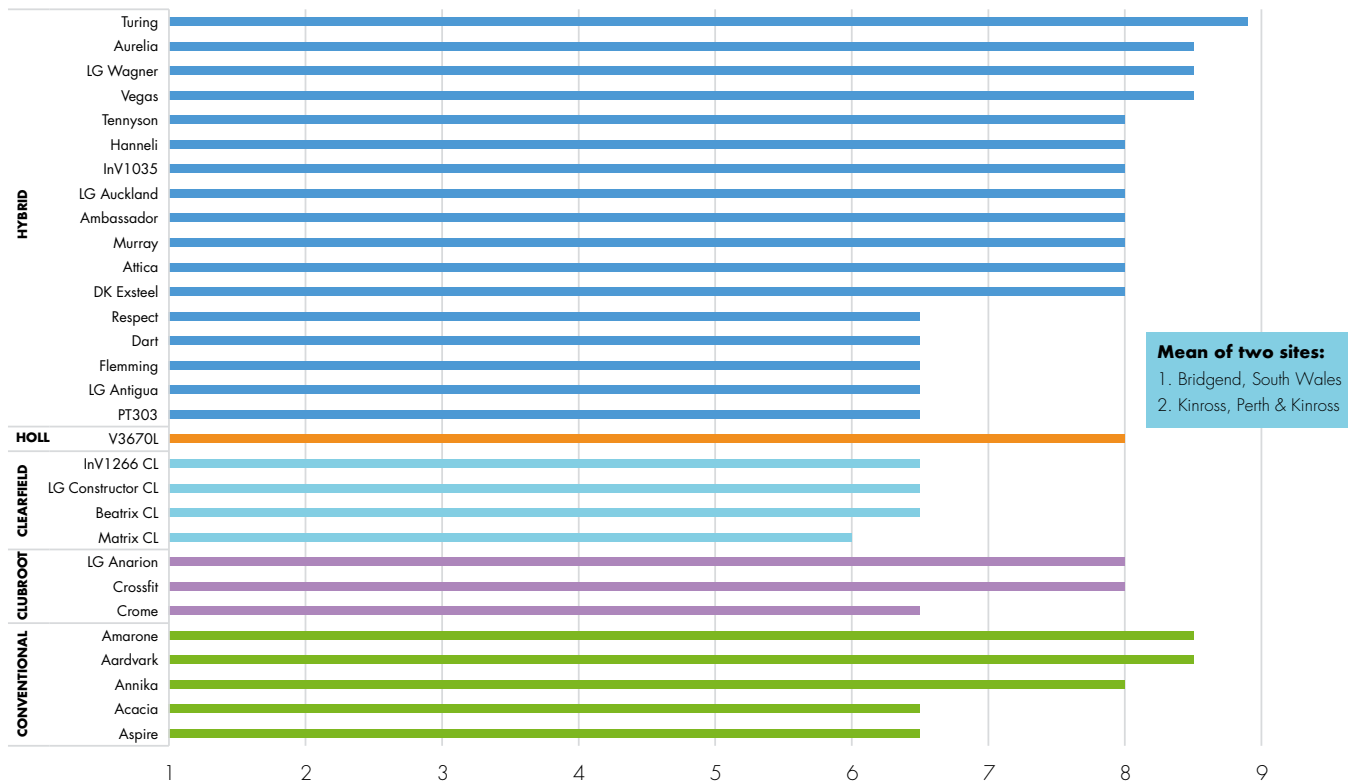
UK AGENT: PREMIUM CROPS LTD



NOTE: Numbers in red – Agrii Advisory List data. Numbers in black – AHDB Recommended List data.

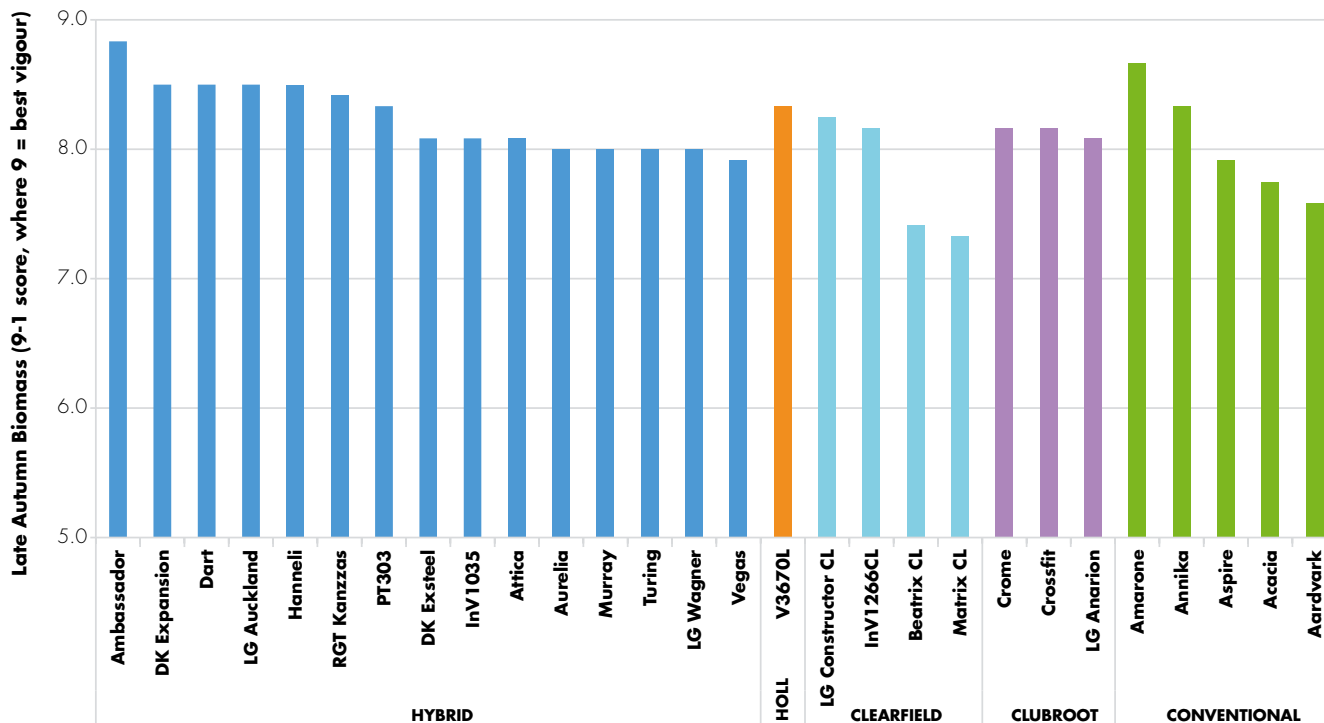


LIGHT LEAF SPOT RESISTANCE, 2022 (1-9 score, where 9 is best)





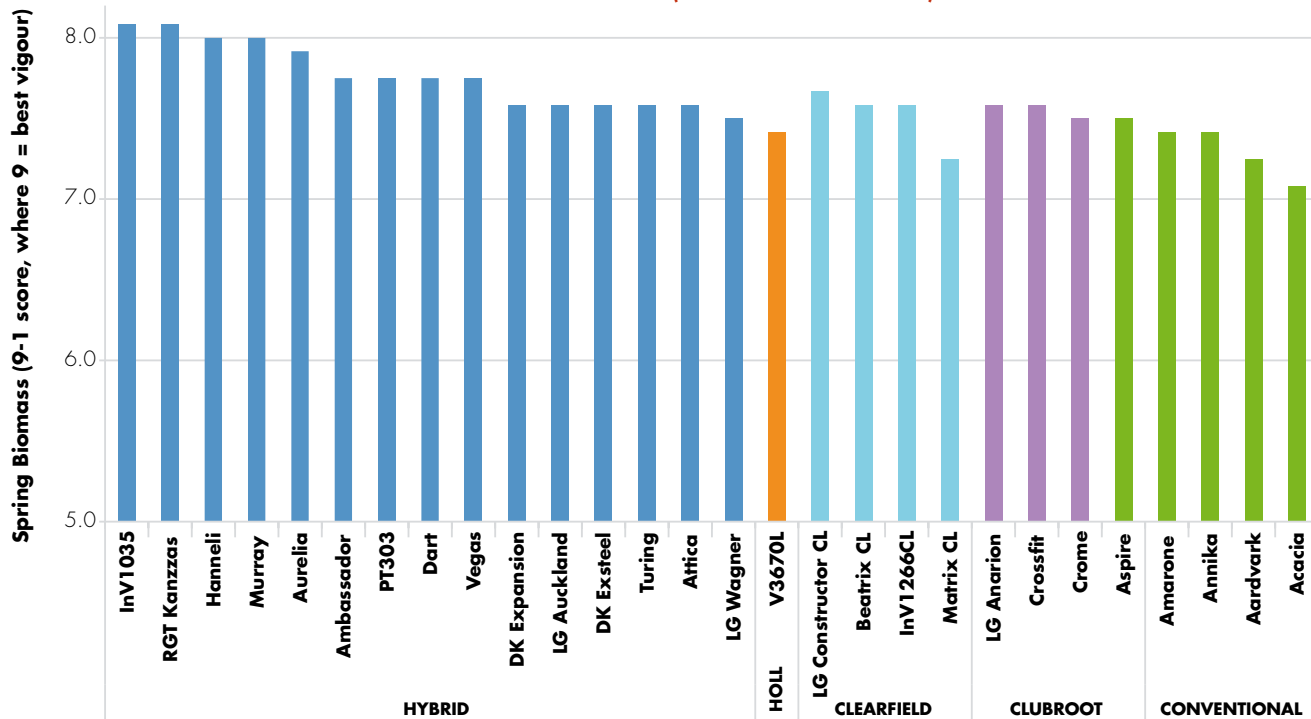
AGRII WINTER OILSEED RAPE MAIN VARIETY TRIAL, 2023 LATE AUTUMN BIOMASS (2 SITE SUMMARY)



Source: Mean of two replicated sites (Lincolnshire and North Yorkshire).



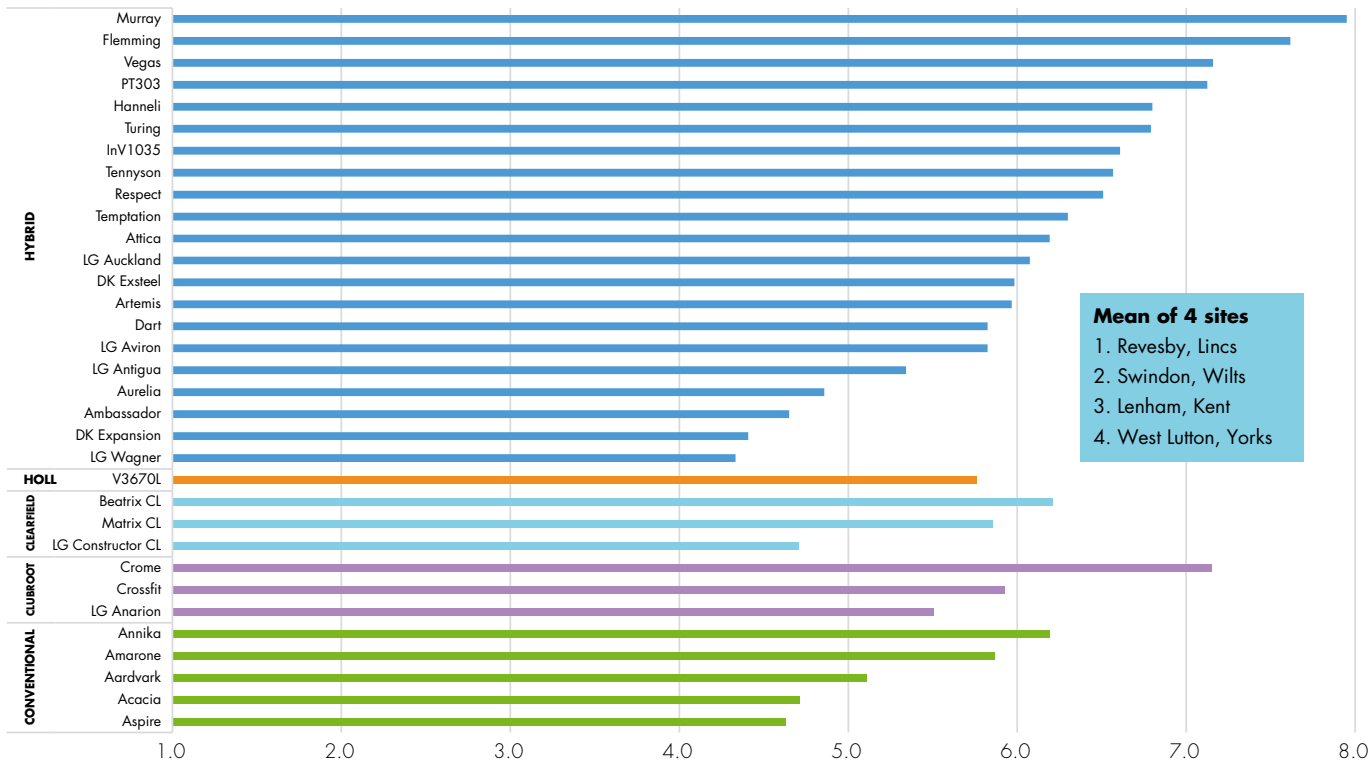
AGRII WINTER OILSEED RAPE MAIN VARIETY TRIAL, 2023
SPRING BIOMASS (2 SITE SUMMARY)



Source: Mean of two replicated sites (Lincolnshire and North Yorkshire).






VERTICILLIUM WILT, 2022 (1-9 score, where 1 is worst)












OSR STARTER FERTILISER NKS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Agrii-Start OSR	139	30	40	0	0
Top Dress 1	 Agrii-Start Nourish	345	60	0	81	50
Top Dress 2	 Agrii-Start Enhance NS	250	100	0	0	35
Total kgs/ha			190	40	81	85

OSR STARTER FERTILISER NS PLAN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Agrii-Start OSR	139	30	40	0	0
Top Dress 1	 Agrii-Start Enhance NS	300	99	0	0	90
Top Dress 2	 Agrii-Start Enhance	150	69	0	0	0
Total kgs/ha			198	40	0	90

OSR STARTER FERTILISER NS PLAN USING FOLIAR NITROGEN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Agrii-Start OSR	139	30	40	0	0
Top Dress 1	 Agrii-Start Enhance NS	300	99	0	0	90
Top Dress 2	 Agrii-Start Enhance	150	69	0	0	0
Green Bud	 Efficie-N28-t	20	7			
Total kgs/ha			205	40	0	90

Nutrient rates are for guidance purposes only. For more info on nutrition, please speak to your local fertiliser product manager or email info@agrii.co.uk.



Agrii-Start OSR

This starter fertiliser is designed to supply the correct autumn nutrients for OSR with the addition of boron and Agrii Protected Phosphate (A.P.P) to improve speed of emergence.



Agrii-Start Enhance

Enhance Granular Urea is Agrii's range of high quality granular N & NS fertilisers. Enhance is powered by Nutrisphere-N which stabilises the nitrogen and reduces the risks from volatilisation, leaching and nitrification.



Agrii-Start Nourish

Agrii-Start Nourish NKS+ is a size matched formulation designed for broadcast systems up to 36m.



Agrii-Start Efficie-N28-t 28% Foliar Nitrogen

Liquid Foliar Nitrogen Fertiliser. A unique Amide Nitrogen (NH₂) formulation designed to provide effective crop uptake whilst maximising crop safety.



8-POINT PLAN FOR MANAGING CABBAGE STEM FLEA BEETLE

Over the past twenty years the industry has relied upon seed treatments and foliar insecticides to contain Cabbage Stem Flea Beetle (CSFB) but with their loss and/or reduced performance, cultural techniques are becoming far more important.

The following eight measures should be used together, in an integrated approach, to deliver the best chance of growing a successful crop.

1 Consider rotation choices

- + Broaden rotations to 1 year in 5 or more.
- + Consider block cropping to isolate your new crop from old stubbles.
- + Look at sacrificial headlands (e.g. turnip rape) to limit pest movement.
- + Leave rape volunteers in neighbouring fields to act as a diversionary food source.

2 Avoid green on brown (adult flea beetle)

- + Drill into tall straw (20 cm), chaff or into green cover.
- + Camouflage the crop and confuse the beetle.

3 Moisture not calendar date

- + If there is no moisture it is best to delay drilling.
- + Use minimal soil disturbance to conserve moisture.
- + Early drilled crops cope better with adult damage but carry higher larval numbers.

4 Rapid growing varieties

- + There is no genetic resistance to cabbage stem flea beetle.
- + Select varieties with faster growth rates in autumn and spring.
- + Larger plants are more resilient to the effects of larval infestation.
- + Use normal seed rates as higher seed rates can often be counterproductive.

5 Soil conditions and crop nutrition

- + Check soil conditions are optimal for early growth with adequate levels of macro and micro nutrients, including boron.
- + Apply seedbed nitrogen (30kg/ha) and phosphate (40kg/ha), ideally in bands, to stimulate roots to grow.
- + Use ammonium nitrate, DAP or Agrii-Start OSR, which is specially formulated by Agrii.
- + Alternatively use organic manures like chicken muck or digestate to give the crop an early boost.

6 Companion and nurse cropping

- + Companion crops appear to discourage the pest, reduce egg laying and overall larval numbers.
- + Buckwheat is the most widely tested, but vetches and berseem clover can be used.
- + Buckwheat can scavenge for phosphate and release this back to the growing crop.

7 Seed and foliar biostimulants

- + Use primed seed or Take Off OSR seed treatment as an establishment aid.
- + Apply a foliar mix of macro and micro nutrients at the two-leaf stage to boost the crop further.

8 Monitor crops and use spray thresholds

- + Check for shot-holing and use yellow traps to assess pest pressure.
- + Foliar insecticides provide only a weak tool to fall back on.



Winter Beans

Winter beans offer a low growing cost compared to OSR and good cultural blackgrass control. Crops will leave good levels of residual nitrogen for the following cereal crop. A wide sowing window offers opportunity to spread the workload.

There are a range of varieties suited to most parts of the country.

Ideally, crops can be sown from mid-October through to December, or if sown in January or February then seed rates should be adjusted upwards to allow for less branching – taking into account the breeder's latest safe sowing recommendations.

Establishment of crops is split equally between sowing on top and ploughing in, conventional plough and cultivate/min-till systems.

If crops are sown to a sufficient depth (around at least 10 cm) to enable good root growth over the winter, then this increases drought tolerance later in the growing season – this is where winter beans will usually perform better than their spring counterparts when under environmental pressure.

Some varieties have reasonable resistance to *Ascochyta* but other diseases can become an issue such as chocolate spot, rust and in some years, downy mildew.

Seed treatments are not regularly used on winter beans, however Take Off ST is available to aid establishment and early growth via improved root development, particularly in difficult conditions.



- + As a nitrogen fixing crop, winter beans are a good addition to the rotation
- + One of the lower risk break crops to grow and with excellent durability
- + A wide range of straightforward establishment methods can be used
- + Great soil structure improving capacity, leaving an excellent entry for wheat



VESPA

HIGH YIELDING, STIFF STRAWED VARIETY
– TREATED YIELD 111%

- + Vespa is a consistently high yielding variety which sits at the top of the PGRO Descriptive list.
- + It yields considerably more (17%) than its predecessor Tundra.
- + It is of average maturity and has robust disease resistance.
- + Vespa has good seed size, slightly larger than Tundra and has strong standing ability at harvest.

BREEDER: SENOVA

VINCENT NEW

NEW VARIETY – TREATED YIELD 108%

- + Vincent yields just 3% behind Vespa.
- + Vincent has a good standing ability at harvest and has an average maturity score, alongside Vespa.
- + It has the best resistance to downy mildew of all the varieties on the PGRO Descriptive List.
- + It has a large seed size, which will suit export markets, along with a high protein content.



BREEDER: SENOVA

TUNDRA

WIDELY GROWN, ESTABLISHED VARIETY
– TREATED YIELD 94%

- + Tundra has been the most widely grown variety in recent years.
- + Now superseded by other varieties in terms of yield but Tundra has proven consistency on farm with good all round agronomics.
- + Tundra has average maturity, similar to Vespa.
- + Seed size is good and has been suited to export markets.

BREEDER: LIMAGRAIN UK

WINTER BEANS OPTIONS								
TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA					
			N	P	K	SO ₃	CaO	MgO
Seedbed	 Agrii-Start PKS+ Pulses Poly	210	0	35.7	39.9	39.9	14.7	5.25
Seedbed	 Agrii-Start PKS+ Pulses KR	210	0	35.7	39.9	31.5	0	31.5



Agrii-Start PKS+ Pulses

Developed by Agrii specifically for use in pulses. Contains Agrii Protected Phosphate (A.P.P) – proven to increase phosphate availability and maximise root growth with chelating activity to free up nutrients from the soil.

Nutrient rates are for guidance purposes only. For more info on nutrition, please speak to your local fertiliser product manager or email info@agrii.co.uk.



FARM SAVING YOUR SEED: The complete service from harvest to drilling

Pre-harvest/harvest management advice and comprehensive seed testing service

Improve the marketability of your crop with our bulk grain cleaning and colour separation service

Timely processing of seed by full-time, experienced and qualified operators

Exclusive seed treatments backed by Agrii's extensive R&D trials programme

Ongoing agronomic advice on drilling date, seed rates and establishment



THE BENEFITS

Identify the most suitable fields, crops and varieties for farm saving.

Improve specific weight and remove contaminants such as ergot.

TGW testing at point of processing. Flexibility over quantities and treatments right up to planting.

Technical seed treatments tailored to individual requirements.

Seed on farm for optimum drilling date. Cost saving and improved cash flow at a critical time of year.

The cost benefit of Agrii's seed treatments:

Seed Treatment	Yield response (t/ha)	Value of yield response* (£/ha)	Cost at 6 ha per tonne (£/ha)	Return on investment	No of trials
Latitude	0.6	130	36	4:1	72
i-Man	0.2	44	10	4:1	72
AgNition	0.2	35	11	3:1	50
Zax	0.1	29	9	3:1	40
Take Off	0.1	22	8	3:1	107
Vibrance Duo	0.1	22	10	2:1	45

*Wheat price/t = £220

See pages 68-73 for more information on our comprehensive range of seed treatments.

WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE ROOT & COVER CROPS

APPENDIX



FARM SAVED SEED NATIONWIDE SERVICE

- 1** David Graham
07785 332218
- 2** George Proctor
07587 770359
- 3** David Steel
07834 905562
- 4** Wayne Ford
07551 156217
- 5** Josh Lawton
07549 121341
- 6** Roy Jefford
07545 207970
- 7** Tom Zealand
07970 677868
- 8** Richard Hill
07970 230374
- 9** Mark Taylor
07836 527251
- 10** John Lewin
07880 039657
- 11** Matt Carlton
07885 253450
- 12** Kevin Crouch
07769 832201





FARM SAVED SEED CASE STUDIES

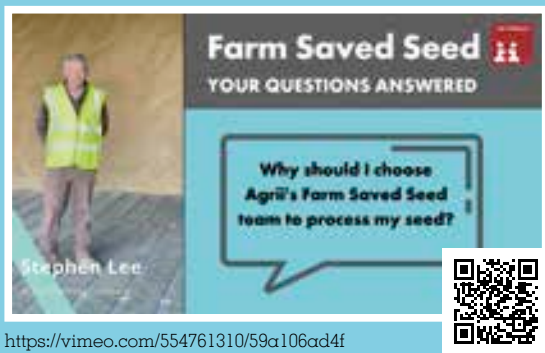
Stephen Lee, AL Lee Farming Company



“ I’ve been using Agrii’s Farm Saved Seed service for more than 20 years now; the team seems very stable and I like being able to ask for the same operator each time.

Personally the service appeals to me, because I like to hit the seed hard to get a good bold sample, and I like the personal touch that the Agrii team provides – I’m there the whole time while the seed is being processed.

They’ve always done a good job and I can’t really fault them. ”



<https://vimeo.com/554761310/59a106ad4f>

Richard Cobbald, Bartlow Estate, Cambridgeshire



“ I’ve had a long-standing relationship with Agrii’s Farm Saved Seed team, and have always found them very efficient and accepting of the needs of the farmer. They seem to be a very professional outfit and always turn up when asked – being explicit in explaining when they’ll be here to give us time to get organised. The teams work to very high health and safety standards, producing very good quality seed.

We’ve made the effort to grow the seed in the first place, so it’s great to have them come in at the end with the ability and machinery to dress it as we need them to, to such a high standard and with the exact products that we want. ”



<https://vimeo.com/554750069/a750248941>

WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

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Seed Treatments

for Autumn 2023



All of the seed treatments below are available with our certified seed, or can be applied to your farm saved seed by our Farm Saved Seed team.

ZAX (ZINC) for wheat, barley and oats

Zinc is an essential micronutrient. Harvested cereal grain and oat straw remove significant quantities of zinc from the soil. Zax delivers 450 g/tonne of readily available zinc. It has been tested by Agrii for the past six years and is an exclusive product.

i-MAN (MANGANESE) for wheat, barley, oats and rye

i-Man applies manganese (Mn) at 450 g/tonne and delivers 20% more manganese than New Manganese Solution. It both penetrates the seed coat and is taken up by roots, leading to increased manganese uptake by the plant. It also contains a unique chelating agent which protects Mn from being locked up by the soil.

Note: Zax and Take Off together are not available as a seed treatment combination.

AGNITION (COPPER) for wheat, barley and oats

Copper deficiency is widespread across Scotland and elsewhere across the UK. AgNition provides a ready source of copper to the emerging seedling and it is compatible with all other seed treatment products in the Agrii range. It is also exclusive to Agrii.

TAKE OFF ST (PHOSPHITE + PGA) for cereals, pulses and oilseeds

Contains two complementary patented biostimulants; phosphite to increase root biomass and root hair production, and Pyroglutamic Acid (PGA) to increase carbon fixation and nitrate utilisation. Take Off increases early vigour and yield, especially under more challenging conditions. Exclusive to Agrii.

KINTO PLUS (TRITICONAZOLE + FLUDIOXINIL + XEMMIUM) for winter cereals

A new seed treatment that controls the main seed and soil-borne diseases of wheat and stimulates root development and crop growth.

VIBRANCE DUO (SEDAXANE + FLUDIOXINIL) for winter wheat and barley

Controls the key seed and soil-borne diseases, stimulates root development and above ground biomass.

BERET GOLD (FLUDIOXINIL) for wheat, oats, rye and triticale

Agrii's preferred base seed treatment for seed and soil-borne disease control. Good flowability in the drill and low dust. Widely compatible.

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ESTABLISH A STRONG AND RESILIENT CROP WITH VIBRANCE® DUO THIS SEASON

PROVEN TO:

- ▶ CONTROL KEY SEED-BORNE DISEASES
- ▶ IMPROVE ESTABLISHMENT
- ▶ INCREASE ROOTING
- ▶ PROTECT YIELD

VIBRANCE®
EFFECT

VISIT OUR WEBSITE TO
SEE THE VIBRANCE® EFFECT

www.syngenta.co.uk

ROOTING
POWER™



 **Vibrance® Duo**

syngenta.

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Tel: 01223 883400 Fax: 01223 882195 Technical Enquiries Tel: 0800 169 6058 Email: customer.services@syngenta.com Website: www.syngenta.co.uk

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 February 2023. 12539.



SEED TREATMENTS

REDIGO PRO (PROTHIOCONAZOLE + TEBUCONAZOLE) for wheat, oats, rye and triticale

A basic fungicidal treatment for seed and soil-borne diseases. Widely compatible.

RANCONA iMIX (IPCONAZOLE + IMAZALIL) for winter barley

Agrii's preferred base treatments for seed and soil-borne disease control. It controls the major diseases and is compatible with all of the seed treatments in the Agrii range.

RAXIL STAR (FLUOPYRAM + PROTHIOCONAZOLE + TEBUCONAZOLE) for winter barley

A basic fungicidal treatment for seed and soil-borne diseases. Widely compatible.

LATITUDE (SILTHIOFAM) for wheat and winter barley

The only product available for take-all control in cereals. It typically recovers half of the yield lost to the disease and improves specific weight in many situations. It must be applied with a base treatment to control seed-borne diseases.

SIGNAL (CYPERMETHRIN) for winter wheat and barley

Following the withdrawal of Deter and Austral Plus, Signal is the only remaining product for controlling wireworm and reducing the impact of wheat bulb fly and frit fly. Widely compatible with other treatments.

Always handle treated seed with caution and thought for the environment and always wear the appropriate personal protective equipment. Avoid pouring the seed from height and ensure all seed is covered by soil and spillages are cleared away.

WINTER WHEAT SEED TREATMENTS	Treatment Type	Seeding blights	Loose smut	Bunt (Seed & Soil)	Septoria nodorum	Blue mould	Ergot (germination)	Take-all	Covered smut (oats)	Wireworm	Wheat Bulb Fly	Frit Fly	Roofing benefits	Seed nutrition
Beret Gold#	Base	✓		✓	✓	✓	✓		✓					
Redigo Pro#		✓		✓	✓	✓	✓		✓					
Vibrance Duo**	Technical Treatments	✓	✓	✓	✓	✓	✓						✓	
Kinto Plus		✓	✓	✓									✓	
Signal*										✓	✓	✓		
Latitude									✓					
Take Off ST														✓
i-Man (Mn)														✓
Zax (Zn)														✓
AgNiion (Cu)														✓

✓ = Control, (✓) = Partial control or suppression. ** for use in oats at 1 litre/tonne to control loose smut. *Not approved for spring wheat or winter wheat drilled after the end of January. # Plus oats, rye and triticale.

WINTER BARLEY SEED TREATMENTS	Treatment Type	Seeding blights	Loose smut	Covered smut	Leaf stripe	Net blotch (seed-borne)	Wireworm	frit fly	Take-all	Roofing benefits	Seed nutrition
Rancona iMix	Base	✓	✓		✓						
Raxil Star		✓	✓	✓	✓	✓					
Vibrance Duo#	Technical Treatments	✓		✓	✓					✓	
Kinto Plus		✓		✓	✓					✓	
Signal**								✓	✓		
Latitude									✓		
Take Off ST											✓
i-Man (Mn)											✓
Zax (Zn)											✓
AgNiion (Cu)											✓

✓ = Control, (✓) = Partial control or suppression. *Full control in spring barley, partial in winter barley.

RANCONA® i-MIX

MICRO-EMULSION FUNGICIDE SEED TREATMENT

BEST IN CLASS

- Protects against seed and soil-borne diseases in wheat and barley
- Reduces ergot germination
- Controls loose smut
- Unique micro-emulsion formulation for low dust and a safer working environment



www.upl-ltd.com/uk

UPL Europe Ltd, Engine Rooms, 1st Floor, Birchwood Park, Warrington, Cheshire WA3 6YN

T: +44 (0) 1925 819999 **E:** info.uk@upl-ltd.com **🐦:** @upl_uk

Map No. 15574. RANCONA i-MIX is an ME formulation containing 20g/L ipconazole + 50g/L imazalil, for use on wheat and barley. Use plant protection products safely. Always read the label and product information before use. Pay attention to risk indications and follow the safety precautions on the label. RANCONA i-MIX is a registered trademark of UPL. © UPL Europe Ltd 2023.





ALL DRESSED UP AND READY TO GROW



Protecting Yield, Quality and Profit

LATITUDE®
The only take-all seed treatment

www.certiseurope.co.uk/latitude

USE PLANT PROTECTION PRODUCTS SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.
For further information with regard to the warning phrases and symbols for this product please refer to the product label.
Latitude® contains siltthiofam. Latitude® is a Registered Trademark of Mitsui & Co. Ltd.
CertisBelchim, Suite 5, 3 Riverside, Granta Park, Great Abington, Cambridgeshire, CB21 6AD.
Tel: 0845 373 0305 email: info@certisUK@certiseurope.com www.certiseurope.co.uk © 2023



Certis Belchim
GROWING TOGETHER



OILSEED SEED TREATMENTS

INTEGRAL PRO

Integral Pro has become the standard base-treatment for oilseed rape. It is also the first biological seed treatment, based on *Bacillus amyloliquefaciens*. It both controls the common damping-off diseases and stimulates the plant's own natural defences to improve early root and shoot biomass. There is also evidence that it can reduce early cabbage stem flea beetle damage but only under low insect pressure. Compatible with Take Off OSR.

TAKE OFF OSR

Take Off helps the oilseed rape crop establish itself in difficult conditions. Proven on-farm to deliver greater root mass and greater uniformity of establishment often leading to improved yields in difficult conditions. It is the combination of two complementary biostimulants, namely stabilised phosphite and pyro-glutamic acid.

Effect of Take Off on crop establishment



WITHOUT TAKE OFF:
29 plants/m² established



WITH TAKE OFF:
36 plants/m² established

AgriiFocus trials, 50 seeds/m², variety DK Excellium

PRIMED SEED

This is proven technology from the vegetable sector. The seed is soaked and brought almost to the point of germination under laboratory conditions and then carefully dried down. The seed becomes physiologically more advanced so when it is drilled it germinates more quickly and evenly. This allows the crop to get off to the best possible start and differences can often be observed in the field for several weeks afterwards. Primed seed is combined with Integral Pro seed treatment as a non-chemical establishment aid for oilseed rape.

This year we are offering primed seed on one of our leading hybrids, Tennyson. More information on this variety can be found on page 50.



Un-primed v. primed seed,
Wold Newton, Lincs 16/09/21



Maize, Grass, Roots, Cover and Companion Crops

MAIZE

Market-leading technical advice and varieties to suit your needs.

GRASS

A full and comprehensive range of mixtures for all types of farming systems and regions.

ROOTS

A wide range of root seeds for additional home-grown winter forage.

COVER CROPS

Used correctly as part of your soil management strategy can deliver a range of benefits.

COMPANION CROPS

Growing two or more crops together increases plant diversity and can provide advantages such as improved soil health or protection of the crop from pests.



WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

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MAIZE

Whether you're growing maize under degradable film in the north west, AD feedstock in the east, silage for livestock in the south west or even maize for grain in the south east – Agrii can supply the market-leading technical advice and varieties you need!

Working closely with international breeders, Agrii is constantly at the leading edge of developments for the UK maize market. Agrii's nationwide Agronomy Team, Seed Specialists and Animal Health Advisors also have access to the most up to date R&D information, herbicide and crop nutrition as well as other associated inputs such as silage additives and degradable film.

R&D is at the heart of Agrii, and regional maize trials play a very large part in how we are able to advise the best variety for you and your system. Trials site tours can be organised on a one-to-one basis at any point of the growing season to identify the key benefits of varieties chosen specifically to be part of the Agrii portfolio.

Not only are we able to demonstrate our market-leading maize varieties, but also the technical support we can offer to growers, which ranges from weed control and seed treatments to foliar nutrition and harvest dates. Furthermore, the Agrii team is always on hand to discuss post-maize cropping options to maximise the output of your land all year round or indeed ensure valuable nutrients are retained and soil erosion is avoided over the winter months.

MAIZE 2023

RESOLUTE

- EARLY
- FAD 190
- 105% Relative DM yield
- 19.3 Tonne DM per Ha
- 105% Relative starch yield
- 6.50 Tonne starch per Ha
- 105% Relative ME yield
- 226 GJ ME per Ha

DRY MATTER YIELDS - FAVOURABLE SITES



LATE **EARLY**

Agrii's comments: The early season is critical for...
Breeder's comments: This variety is...
Agrii's comments: This variety is...
Breeder's comments: This variety is...




Please request a copy of our 2023 maize guide for more information or click on the brochure image left.



MAIZE STARTER FERTILISERS

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Maize Kicka	62	11	12	0	17
Top Dress	 Agrii-Start Enhance	300	138	0	0	0
Total kgs/ha			149	12	0	17

MAIZE STARTER FERTILISER OPTIONS COMBINED WITH LATE FOLIAR NITROGEN

TIMING	PRODUCT	RATE/HA	NUTRIENTS KGS/HA			
			N	P	K	SO ₃
Seedbed	 Maize Kicka	62	11	12	0	17
Top Dress	 Agrii-Start Enhance	287	132	0	0	0
Late Season N	 Efficie-N28-t	20	7			
Total kgs/ha			150	12	0	17

Nutrient rates are for guidance purposes only. For more info on nutrition, please speak to your local fertiliser product manager or email info@agrii.co.uk.



Agrii-Start Maize Kicka

A granular compound 2-4 mm which is perfect for accurate placement. Treated with 'Kicka' – Methanoic Zinc Amionate to promote root growth and help the plant access nutrients.



Agrii-Start Enhance

Enhance Granular Urea is Agrii's range of high quality granular N and NS fertilisers. Enhance is powered by Nutrisphere-N which stabilises the nitrogen and reduces the risks from volatilisation, leaching and nitrification.



Agrii-Start Efficie-N28-t 28% Foliar Nitrogen

Liquid Foliar Nitrogen Fertiliser. A unique Amide Nitrogen (NH₂) formulation designed to provide effective crop uptake whilst maximising crop safety.



IN 2023 WE ARE CELEBRATING THE 50th ANNIVERSARY OF MASTER LEYS!

We're running competitions at our events throughout the year, ranging from the opportunity to win a grass seed and grassland MOT bundle, to a chance to win two tickets to attend the Farmers Weekly Awards. 50 Years and continuing to grow...

Master Leys: the grass seed of choice for growers over the last 50 years

The Master Leys range of grass mixtures offers full and comprehensive options for all types of farming systems and regions of the UK.

Working closely with leading grass seed breeders throughout the UK and Europe, Agrii is able to access the best varieties for the Master Leys portfolio. In addition to this, Agrii grows and produces more than 80% of the seed used to produce Master Leys. This gives us greater control over the quality of the seed we use and ensures that what goes into a Master Leys bag is of the highest possible standard.

The best varieties from the Grass and Clover Recommended List are specifically chosen for each Master Leys mix. We're continually developing and innovating our variety choices and mixtures – ensuring that we provide the most resilient and best performing grass mixtures for your specific requirements and current climates.

The story doesn't stop with the seed in the bag. Agrii agronomists and crop input specialists provide advice throughout the lifetime of the ley to ensure the best possible returns from your grass. This covers nutrition, weed control and forage nutrient analysis, together with support on animal health and advice on storage. This integrated approach to making your grass work harder will help drive on farm profitability from your home grown forage.



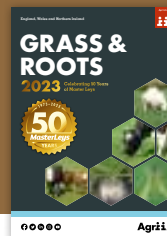
ROOTS

To help reduce reliance on bought-in winter feed, we also offer a wide range of root seeds, which will help provide additional home-grown winter forage.

By visiting trials sites and working closely with breeders, we are able to choose and offer the best varieties across all species of roots. Not only can we offer the best varieties, we can also offer advice on establishment techniques, nutrition for the crop and agrochemical inputs, to help you achieve maximum forage output.

Along with this, we can also offer advice on feeding the crop to help reduce wastage and to make sure the crop that you have grown is utilised to its full potential.

See our Roots Seed Selector in the Grass & Roots brochure for more information.



Please get in touch for more information about our grass mixtures, or for a copy of the Agrii Guide to Grass & Roots, or the Agrii Livestock Directory. You can also click on the cover images on the right for the digital versions.



COVER AND COMPANION CROPS

THINKING ABOUT COVER CROPS?

Agrii started to conduct comprehensive trials of cover crop species in 2014, initially to establish whether they could successfully be incorporated into existing rotations and if they would provide positive agronomic and financial benefits to farmers.

During this time we have looked at all aspects of cover crop agronomy from establishment to termination and beyond, and through trial and error we have been able to select the most reliable species and actions to maximise cover crop performance. We continue to conduct a national network of cover crops trials to investigate the interaction of different species and mixtures with the soil biota to identify the most beneficial soil health outcomes.

Cover crops are not a quick fix to reverse declines in soil health and productivity but in the longer term, when used as an integral part of your farming strategy, they will improve farm sustainability by enhancing soil health, fertility and productivity whilst reducing input costs. The key elements for success are to increase organic matter content in the soil and maintain a diversity of living roots through the soil profile for as much of the year as possible. The use of a diverse cover crop mix in the periods between cash crops will help support and increase the quantity and diversity of soil biota in the soil, aiding nutrient cycling and carbon sequestration.

Please get in touch for details of mixtures or species that we recommend for specific crop rotations and soil issues.

Download your copy [Cover Crops Technical guide](#) – [click this link or scan the QR code.](#)



COMPANION CROPPING

Another method to increase species diversity in cash crops is by the use of companion crops which will bring benefits to the cash crop and soil health.

A good example of this is the work Agrii has done in developing a companion crop for OSR to help reduce cabbage stem flea beetle (CSFB) damage. Following trials of different species, we identified **Lifago buckwheat** as the best option to reduce initial damage at establishment, but more importantly greatly reduce CSFB larvae damage in the spring. Along with these benefits, the Lifago buckwheat root exudates are able to mobilise phosphate in the soil, making it available to the OSR crop as well as helping to counteract the negative effect of OSR on some soil biota.

Lifago buckwheat





INNOVATION CROPS

We are always looking to investigate alternative crop options to offer our growers, to diversify their rotations.

We look for the best varieties to grow in the UK climate, optimise the agronomics through our R&D team, and work with end-users to identify markets to offer secure buy-back contracts.

Currently we offer buy-back contracts through our GB Seeds team for naked oats, linseed, and peas, but we also have two new crops entering our portfolio: food barley and haricot beans.

Find out more at
www.gbseeds.co.uk



Food barley



Haricot beans

NAKED OATS

Naked oats are grown exclusively on contract for Agrii/GB Seeds and are used in multiple sectors.

GB Seeds has been at the forefront of naked oats in the UK for many years, covering all aspects of the crop and focusing on the entire chain from seed production to the development of end markets.

We work closely with our end users and plant breeders to enhance and raise the profile of this high value quality product.





CROP MARKETING

In order to support our farmer customers and maximise returns through grain sales as well as agronomy, Agrii has a well established partnership with grain marketing specialist, Viterra UK Limited, as well as our own specialist grain marketing division, GB Seeds.



Viterra has port and storage facilities throughout England and Scotland and strategic links with most feed and milling consumers in all regions.

- + Agrii's research into variety selection coupled with Viterra's detailed knowledge of the market, gives growers a selection of low risk, high output crop options.
- + Marketing choices include buy-back contracts, pool marketing or movement at harvest with an option to price later.
- + The Grainman sales and account management system at www.grainman.co.uk can be used to obtain prices and accept bids, view samples and monitor grain movements and payments.

For more information please speak to your usual Agrii contact.

You can also get in touch directly with Viterra UK Ltd on 01844 261261 or by email at thame.Origination@viterra.com or lucy.b-exley@viterra.com (Scotland).



GB Seeds is the specialist grain marketing division of Agrii, specialising in working with added value crops and grain.

- + GB Seeds works with a wide range of end users supplying specialist seeds and grains, enabling growers to diversify their cropping in a fast changing environment and allowing growers to capture both economic and environmental benefit.
- + GB Seeds offers a range of buy-back opportunities – please get in touch for more information.
- + The GB Seeds team is working hard to bring innovation crops to market – find out more at www.gbseeds.co.uk.

For more information, please get in touch with your usual Agrii contact, or with GB Seeds direct, on 01284 729200 or at info@gbseeds.co.uk.



VITERRA

THE
AGRICULTURE
NETWORK

65+
Workforce

3 Marketing
offices

Origination

Viterra have been buying grain from farmers in the UK for over 50 years. Currently Viterra have 14 full time farm traders procuring grain from Aberdeenshire to Cornwall. The Origination team are involved in all UK grown combinable crops servicing the domestic and export market.



Storage & handling

Viterra have access to inland storage and handling facilities which allows adding value to growers and consumers. As markets evolve; processing practices are adjusted accordingly; eg colour sorting machines to clean ergot from grains which recently has become a challenge for many.



Grainman

Grainman is Viterra's online trading platform, created in 2000 well ahead of its time. It's still thought of throughout the industry as the market leader allowing growers to sell 24/7, follow movement, payment details and much, much more.



Port Terminals

Viterra have access to 11 port terminals in the UK ranging from deep sea panamax facilities to tidal coaster ports stretching from the South coast of England to the North coast of Scotland. This allows both the export and import of commodities in a very efficient manner.



Logistics

Viterra's logistics network of third party bulk lorries, vessels and containers allows execution of goods from the farm gate to the consumer either directly or through one of their handling / processing facilities.



Access to
11 Port
terminals

25 Storage
facilities

Marketing

Viterra have three marketing offices; the head office being in Thame, Oxfordshire. There is also an office in Cheshire and an office in Portland, Dorset. Trading both UK produced grains and imported core animal feed products.



2,300+
Direct connections
with growers

50+
Years of experience
in the UK

153
Vessel executed
in 2022

3
2022 sales volumes,
mMT

Source: Company information, 31 December 2022

Appendices

AGRII FINANCE

ALL ABOUT AGRII-SEED

MASTER SEEDS STANDARDS

RESERVED SEED

KNOWLEDGE TRANSFER

Agrii Finance

Agrii Finance is an input financing solution, giving you the flexibility to manage cash flow to suit your business needs.

Agrii Finance is independent of grain transactions and you won't be committed to a particular input manufacturer.

It means you can make the best growing and marketing decisions for your crops without being constrained by cash availability.

We are permitted to act as a Credit Broker. We do not fund any credit contracts ourselves; all credit applications are introduced to our third-party lender De Lage Landen Leasing Limited (DLL).

For more information, speak to your usual Agrii contact or call our Agrii Finance Team who will be pleased to help on **01937 588095** or email **af@agrii.co.uk**

- ✓ **CROP PROTECTION**
- ✓ **MASTER SEEDS**
- ✓ **NUTRITION**
- ✓ **ANIMAL HEALTH**
- ✓ **PIPES AND TANKS**

- + Unsecured with a number of repayment schemes to match payments to your cashflow
- + Competitive fixed interest rates
- + Fast and efficient process
- + Exclusive to Agrii customers for ALL Agrii inputs
- + Minimum spend £3k
- + Subject to £60 lender documentation fee

Credit is subject to status and credit acceptance. All applicants must be 18 or over and credit is for business purposes only. Agrii is a trading name of Masstock Arable (UK) Limited who are authorised and regulated by FCA (FRN 710790). We are remunerated annually, by DLL, in the form of a volume rebate payment. The payment does not vary based on the Finance scheme you choose to take. Registered postcode: GL54 4LZ.



AN INTRODUCTION TO AGRII-SEED



A SCIENCE BASED APPROACH TO VARIETY SELECTION

Varieties are selected using the most extensive trials network in the UK – working with plant breeders to produce independent data that gives us the very best balanced views of what varieties can offer.

Our Variety Sustainability Ratings (VSRs) allow us to provide growers with the highest level of resilience and consistency. For more information on VSRs, please see pages 4 and 5.



MASTER SEEDS QUALITY

Our Master Seeds are tested more rigorously than both C1 and C2 Higher Voluntary Standard seed, providing you with product integrity so that you can sow with confidence.



SUPPORTING OUR FUTURE SEED BUSINESS

Our continued investment in seed plants and our Farm Saved Seed mobile seed units, enables maintenance of our quality standards and logistical excellence, ensuring accuracy of application to provide reliable seed quality.



SUSTAINABLE PRODUCTION OF RAW MATERIAL

Our seed production is carried out by high quality farmers as local to seed plants as is practically possible, reducing carbon footprint and supporting local businesses.



INVESTING IN OUR PEOPLE

The training of our Seed Specialists, quality control colleagues and operators meets all national protocols to ensure advice and product continue to exceed industry standards.



REGIONAL EXPERTISE

All of our local agronomy teams have Seed Specialists embedded within them to provide a high level of support and local understanding of the needs of our customers.



WE WORK WITH THE BEST IN THE INDUSTRY TO PROVIDE INPUT SOLUTIONS

Our seed treatment solutions are rigorously tested through our own trials network to provide the best proven products available in the industry. Go to pages 68-73 to find out more.



SEEKING NEW MARKETS

We are continually analysing opportunities to introduce innovation crops to the UK market, expanding customer choice through species adapted to UK conditions and supported by consumers.



BUY-BACK OPPORTUNITIES

We work with consumers and grain partners to identify suitable varieties for buy-backs across all species.



Conventional Wheat, Barley, Oats

SEED SAMPLE STANDARDS	Master Seeds	C1 HVS	C2 HVS	C2 Lower	C1/C2 Triticale
Germination level	90% On preliminary germ	85%	85%	85%	80%
Vigour tests carried out on	Winter Wheat Spring Wheat	No test required	No test required	No test required	No test required
Analytical purity (inert matter) % weight	1% (99%)	1% (99%)	1% (99%)	2% (98%)	2% (98%)
Loose smut in barley	Treated for control	0.2% or treated	0.2% or treated	0.5% or treated	n/a
Embryo testing for loose smut in barley	Treated for control	Not compulsory	Not compulsory	Not compulsory	n/a

MAXIMUM IMPURITIES ALLOWED					
IMPURITY	Master Seeds 2kg sample	C1 HVS equivalent 2kg sample	C2 HVS equivalent 2kg sample	C2 Lower equivalent 2kg sample	C1/C2 Triticale equivalent 2kg sample
Seeds of other cultivated cereal species	2	2	6	28	28
Seeds of brome or couch species	2	2	2	28	28
Seeds of blackgrass (<i>Alopecurus myosuroides</i>)	Nil	2	4	28	28
Seeds of other weed species	2	2	4	28	28
Maximum species impurities allowed	4	4	8	40	40
Ergot pieces	1	2	2	12	12
Wild oats	Bardex tested Nil in 20kg	Nil in 1kg sample	Nil in 1kg sample	Nil in 1kg sample	Nil in 1kg sample
Sample size inspected	2kg	1kg	1kg	0.5kg	0.5kg

Hybrid Barley

SEED SAMPLE STANDARDS	Master Seeds	Certified seed
Germination level	90% On preliminary germ	85%
Analytical purity (inert matter) % weight	1% (99%)	2% (98%)

MAXIMUM IMPURITIES ALLOWED		
IMPURITY	Master Seeds 2kg sample	Certified seed standards equivalent 2kg sample
Seeds of other cultivated cereal species	7	28
Seeds of brome or couch species	Nil	No Standard
Seeds of blackgrass (<i>Alopecurus myosuroides</i>)	Nil	28
Seeds of other weed species	4	28
Maximum species impurities allowed	10	40
Ergot pieces	4	12
Wild oats	Bardex tested Nil in 20kg	Nil in 1kg sample
Sample size inspected	2kg	0.5kg



Hybrid Rye

SEED SAMPLE STANDARDS	Master Seeds	Basic	C2
Germination level	90% On preliminary germ	85%	85%
Analytical purity (inert matter) % weight	1% (99%)	2% (98%)	2% (98%)

MAXIMUM IMPURITIES ALLOWED		
IMPURITY	Master Seeds 2kg sample	C2 Equivalent 2kg sample
Seeds of other cultivated cereal species	4	28
Seeds of brome or couch species	Nil	28
Seeds of blackgrass (<i>Alopecurus myosuroides</i>)	Nil	28
Seeds of other weed species	4	28
Maximum species impurities allowed	8	40
Ergot pieces	4	12
Wild oats	Bardex tested Nil in 20kg	Nil in 1kg sample
Sample size inspected	2kg	0.5kg

Naked Oats

SEED SAMPLE STANDARDS	Master Seeds	C2 HVS	C2 Lower Minimum
Germination level	80% On preliminary germ	75%	75%
Analytical purity (inert matter) % weight	1% (99%)	1% (99%)	2% (98%)

MAXIMUM IMPURITIES ALLOWED			
IMPURITY	Master Seeds 2kg sample	C2 HVS Equiv 2kg sample	C2 Lower Equiv 2kg sample
Seeds of other cultivated cereal species	6	6	28
Seeds of brome or couch species	Nil	2	28
Seeds of blackgrass (<i>Alopecurus myosuroides</i>)	Nil	4	28
Seeds of other weed species	4	4	28
Maximum species impurities allowed	8	8	40
Ergot pieces	1	2	12
Wild oats	Bardex tested Nil in 20kg	Nil in 1kg sample	Nil in 1kg sample
Sample size inspected	2kg	1kg	0.5kg

Notes

There are no higher voluntary standards (HVS) for Triticale / Hybrid Barley / Hybrid Rye.

Bardex test: A Bardex test does not have to be carried out on the on line QC so long as a 20kg sample is tested for each final seed certification lot produced as Master Seeds. Cereal seed must not exceed maximum moisture content of 17% on all grades.

Thousand seed weight, should normally be carried out on a screened farm sample, alternatively it may be carried out on a screened sample from the as-grown intake or from the cleaning line.

Beans

SEED SAMPLE STANDARDS	Master Seeds	Certified seed
Sample size examined	2kg	1kg
Purity (% by weight)	Minimum 99%	Minimum 98%
Germination	90% on preliminary test	80%
Ascochyta C1	Nil	No standard
Ascochyta C2	0.5%, maximum 6% if treated	No standard
Stem nematode infection C1	Nil on a sample from the cleaned seed lot	No standard
Stem nematode infection C2	Absent	No standard
Other plant species in total	Maximum 0.1%	Maximum 0.5%
Wild oats	Nil in 2kg	Nil in 1kg

MasterSeeds™

PRIORITY SEED DELIVERY

RESERVED



WINTER WHEAT
WINTER BARLEY

- WINTER WHEAT
- WINTER OILSEED RAPE
- WINTER BARLEY
- WINTER RYE

Priority delivery for early seed supply

Master Seeds RESERVED seed is held back from the previous harvest for growers who require early seed supply for the following year.

It is cleaned, then germination tested and treated in June/July and delivered immediately. **It has all of the usual Master Seeds benefits**, but with the peace of mind of being able to reserve your priority seed, ready and tailored as you need it, to meet your early drilling requirements.

Securing your seed supply with **RESERVED** seed means that it will arrive on-farm, in advance, at a convenient time for you – avoiding logistical problems at the time of drilling.



ON TIME + ON SPECIFICATION = PEACE OF MIND

FIND OUT MORE...

Please get in touch with your usual Agrii Agronomist or Seed Specialist for more information, or contact the Agrii Seed Desk on **01277 898202** or email **info@agrii.co.uk**.

THE MASTER SEEDS BENEFITS

- + **The most extensive trials network in the UK** used to create the Agrii Advisory List – a balanced view of what different varieties can offer.
- + **Master Seeds certified seed is processed** using our own or Agrii approved production facilities.
- + **It is fully traceable** and undergoes rigorous quality control.
- + Seed treatment solutions that are **meticulously tested through our own trials network** to provide the best proven products available in the industry.

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE ROOT & COVER CROPS

APPENDIX

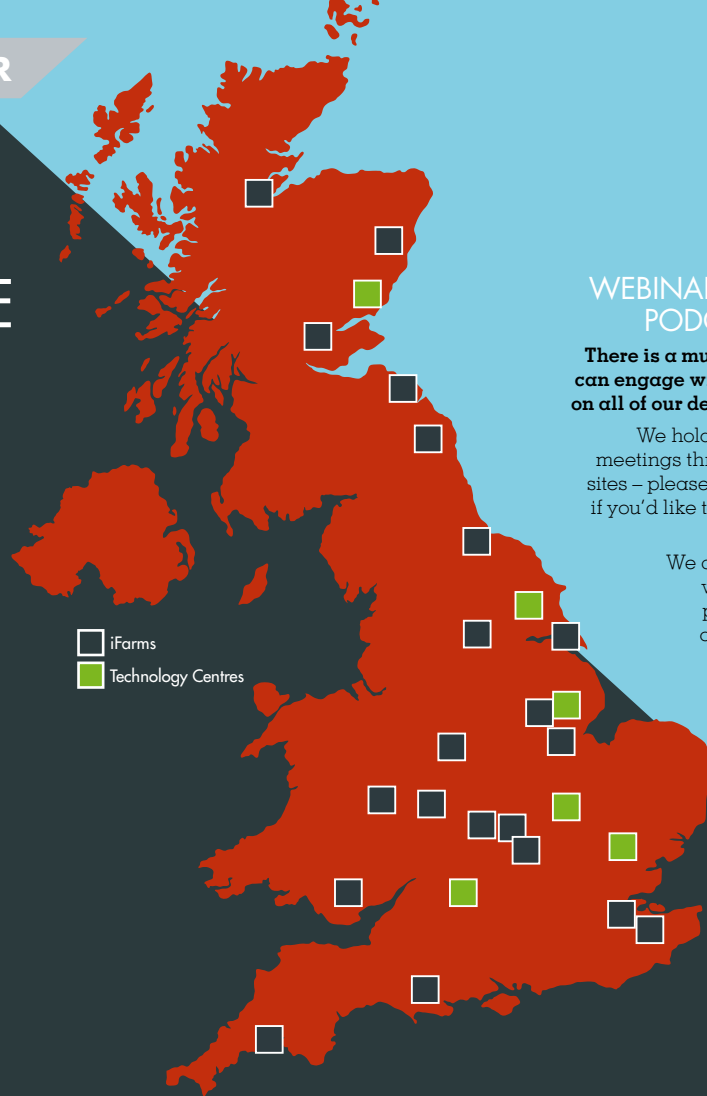


KNOWLEDGE TRANSFER

iFARMS AND TECHNOLOGY CENTRES

Agrii has a network of 28 iFarms and Technology Centres across the UK, kindly hosted by Agrii clients, where local farmers and growers can view demonstrations of new agronomic innovations, and discuss how they can be put into practice on farm.

Our iFarm trials cover a whole range of crops from arable and grassland, to fruit, veg and innovation crops.



WEBINARS, VIRTUAL iFARMS, PODCASTS AND EVENTS

There is a multitude of ways in which you can engage with the work that we're doing on all of our demonstration and trials sites.

We hold a number of open days and meetings through the year at each of our sites – please ask your usual Agrii contact if you'd like to receive invitations to these, or email info@agrii.co.uk.

We also host virtual events and a whole range of webinars and podcasts throughout the year on topics from variety choices and nutrition programmes, to carbon calculators and sustainable innovation.

Find out more at: www.agrii.co.uk/events

WINTER WHEAT

WINTER BARLEY

HYBRID RYE

WINTER OATS

WINTER OILSEED

WINTER BEANS

FARM SAVED SEED

SEED TREATMENTS

MAIZE ROOT & COVER CROPS

APPENDIX



YOUR LOCAL CONTACTS

SEED COMMERCIAL TEAM

Lee Robinson
Executive Director of Seed 07860 523109

Rodger Shirreff
National Seed
Business Manager 07831 188500

Louise Rawlinson
Seed Commercial
Operations Manager 07721 788943

Lauren Rettie
Seed Product Manager 07964 510067

Mark Taylor
National Farm Saved
Seed Business Manager 07836 527251

Ben Lowe
National Forage
Product Manager 07966 533374

Adam Simper National Grass,
Roots and Environmental
Seeds Manager 07767 007021

SEED TECHNICAL TEAM

John Miles
Seed Technical Manager 07855 130439

David Leaper
Seed Technical Specialist 07972 188228

Simon Hobbs Cover Crop,
Environmental and Wildflower Seeds
Technical Manager 07770 643365

Hayley Wellings Forage Crop
Technical Seed Specialist 07966 370355

LOCAL

A	Lincoln Seed Plant	
B	Finnmere Seed Plant, David Smith	07768 865078
C	Moreton Seed Plant	
D	GB Seeds, Ella Thackray	07779 426676
1	Barry Henderson	07976 953081
2	Tim Hatton	07827 831275
3	Lauren Rettie	07964 510067
4	Jack Wilson	07557 156934
5	John Charlton	07469 284165
6	Rebecca Gibson	07721 128172
7	Alex Rogers	07469 284694
8	Matt Richardson	07887 547287
9	David O'Donohoe	07551 327710
10	Samantha Gallagher	07841 777026
11	Gavin Taylor	07973 854046
12	Sophie Dillon	07826 956226
13	Ben Foster	07896 446311
14	Jack Riddington	07880 387786
15	Poppy Bunting	07967 593776
16	Katherine Whistance	07989 696743
17	Jamie Lyttle	07970 647511
18	Saul Creed	07836 548654
19	Rob Stuart	07563 390273
20	Ian Davy	07890 550559
21	Angie Baker	07796 193895
22	Ellie Browning	07814 094803
23	Tom Perrott	07976 437568
24	Will Sanderson	07980 943538
25	Cas Sandy	07970 641741
26	Dan Wood	07774 710799
27	Louise Rawlinson	07721 788943



For all your seed enquiries please contact your Crop Inputs Specialist on one of these numbers or your local Agronomist.



www.agrii.co.uk

Printed using vegetable inks on paper made from FSC® certified and traceable pulp sources. Manufactured in accordance with ISO certified standards for environmental, quality and energy management. A Carbon Balanced product with World Land Trust certificates.

Agrii™