GatePost
FROM THE BREEDER | Limagrain UK

LG Variety Demonstration Days

TOM BARKER
Cereals & Pulses
Product Manager

If you're keen to know how to get the best out of your arable crops this year, then why not attend one of our LG Variety Demonstration Days, situated at various sites around the UK?

There's no better opportunity this summer to speak to breeders and technical experts about arable varieties grown in an on-farm situation. You will see LG Redwald winter wheat - our new highest-yielding variety on the AHDB Recommended List, LG Caravelle – the most exciting 2-row winter barley in years, together with Candidates - including future superstar hard feed wheat, LG Beowulf.

Arable technical manager, Ron Granger, and senior wheat breeder, Phil Tailby, will be on hand to provide expert advice and answer any questions you may have.

By popular demand, we'll be bringing back the moisture meter clinic, so make sure you bring your moisture meter along!

There will be machinery demonstrations and each event will feature talks by other industry experts, so you can gather all the information you need in one day!

VARIETY PLOTS

And what's more, you can claim BASIS and NRoSO points for attending.

Join us - Register Now

WOOLPIT	20th June
NEWBURY	21st June
MALDON	23rd June
ROTHWELL	4th July
PERTH	11th July

These events are always popular, so make sure you REGISTER NOW by visiting: https://bit.ly/2023LGDemos

Or Scan the QR Code

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LG REDWALD - TAMING THE BEAST

RON GRANGER
Arable Technical Manager

Limagrain's newest wheat addition to the 2023-24 AHDB Recommended List, LG Redwald, follows in the footsteps of LG Skyscraper as the highest yielding feed wheat with a UK treated yield of 107% - sitting at 107% in the east and an impressive 109% in the west.

LG Redwald has shown this high yield consistency across regions and very testing seasons of weather. Its high untreated yield of 92% reflects its very good disease resistance, especially for *Septoria tritici*.

How to get the best out of LG Redwald

1. Adjust Seed Rates

LG Redwald is a high tillering, big biomass plant type, so consider a lower seed rate. Limagrain trials over several seasons show that reducing the seed rate by 20% had no effect on overall yield performance, with better lodging resistance.

2. Straw Strength

LG Redwald is a taller variety (94cm) with a big biomass, so a well targeted, robust, split PGR programme is recommended. If the desired early split timings are not achieved, then the inclusion of a late PGR (Cerone or Terpal) is advised.

3. Drilling Date

Do not drill LG Redwald too early, as it does not have the characteristics associated for the early drilling situation. It suits the standard drilling window of mid-October onwards and can be drilled to the end of January. For growers in the north, the drilling date can be pulled back to the beginning of October.

4. Soil Type

LG Redwald benefits from being grown on water retentive soil types; not lighter soil types associated with drought situations. Reduce seed rates and implement a good PGR programme for heavier/ fertile soils.

> "LG Redwald has shown this high yield consistency across regions and very testing seasons of weather."

5. Rotational Position

LG Redwald performs well as a 1st or 2nd wheat. Sitting as the highest yielding wheat (109%) in a 2nd wheat situation, it is a valuable variety to improve gross margins in this challenging situation. It has good tolerance to take-all, but a low rating for eyespot and should be treated accordingly.

6. Fungicide Programme

LG Redwald has good disease resistance for *Septoria tritici,* and both Rusts – we advise that all crops should be monitored and treated accordingly.

Whilst trials show that a robust on-farm fungicide strategy should be implemented, a T0 spray may not be required, depending on disease pressure. However, a robust T3 fungicide is important for protection against Fusarium, and as it is a later maturing variety, there are benefits from maintaining green leaf canopy to maximise grain fill.

7. Insecticide

LG Redwald has OWBM resistance.

LG CARAVELLE - THE EASY CHOICE

TOM BARKER
Cereals & Pulses Product Manager

Over the last 10 years, breeders have made great progress in improving 2-row feed winter barley varieties. Newer varieties offer superior yield potential with better disease resistance and good grain quality attributes - desirable characteristics recognised by all feed barley growers.

LG Caravelle leads the way in this new world, as the highest yielding 2-row winter barley to join the 2023/24 AHDB Recommended List.

Bred by Limagrain, LG Caravelle dispels any misconception that 2-row barleys are lower yielding than hybrids, as it offers UK yields of 106% - which is as high as the present top yielding hybrids. Its performance in the east (109%) is exciting, with a significantly higher yield potential than any other variety; including hybrids - where it has a 3% advantage.

More importantly, the variety has shown a high consistency of performance across both regional and seasonal data sets.

These high yields are backed up by an excellent disease profile, reflected in LG Caravelle's high untreated yields.

The variety has a good rating of 7 for mildew, which can be a difficult disease to control in winter barley, as we saw last spring. Limagrain data suggests a 7 rating for brown rust - again this disease can be the yield robber in many seasons when not effectively controlled.

The variety has a respectable 6 rating for Rhynchosporium, a 5 for Net Blotch and is BaYMV resistant.

Agronomically, LG Caravelle is shorter strawed like LG Mountain, and offers both good lodging and brackling ratings with an earlier maturity (0).

LG Caravelle also offers an exceptionally high specific weight for a winter barley, at 71.8 kg/hl; one of the best available and only surpassed by the old favourite, KWS Cassia.

Early indications from AGRII black-grass competition trials in Cambridgeshire, suggests that LG Caravelle is competitive in a black-grass situation, offering high yields and black-grass ear reduction levels similar to that of hybrids.

LG Caravelle has raised the bar for barley yields and combined with the desirable agronomic attributes of good disease resistance, stiff straw and an excellent specific weight, it is the ideal winter barley for drilling in autumn 2023.

George Thompson - Lincolnshire

George Thompson of Grasby House Farm, Barnetby, Lincolnshire, grew a seed crop of LG Caravelle in 2022. "Despite the challenging weather, and being grown on a light sandy soil, we got a decent yield and excellent straw from LG Caravelle".

> "This year it tillered well and is pretty clean disease-wise, to date. It definitely offers a step up from LG Mountain."

LG LIVE PANEL - VARIETIES, SOILS & POLICY

On 21st March, Limagrain's Ron Granger and Tom Barker were joined by industry experts, Tim Parton (farm manager, Staffordshire) and Susan Twining (CLA Advisor) for a live Q & A round table discussion on varieties, soils and policy.

Key Questions

1. Do you still think yield is king? Are breeders, such as Limagrain, breeding varieties specifically for a regen system?

RON GRANGER: Yield will always be important because farmers have to make an income. But the key issue going forward is around yield security, especially with our changing climate. For example, the capability of a plant to withstand spring droughts is now becoming an increasingly important factor.

RON GRANGER

> "The key issue going forward is around yield security, especially with our changing climate."

Robust disease resistance also has a key part to play – we are currently seeing the fruition of stacking genes in both *Septoria* and Rust resistances. Resistance to pests is also key.

Most growers have been adopting some form of regenerative practice for the last 5 years, so we are in a position where growers are able to tell us, as breeders, what they want from varieties to suit a regen system for the future.

Generally, varieties for regen have been chosen from the present AHDB RL - which is not a problem. However, as breeders, we can look at the germplasm in our programme and identify varieties that will better suit a direct drilling, wide-row situation.

2. What type or size of crop rotation is likely to be needed to sustain regenerative farming? Do you use companion cropping?

TIM PARTON: I try to extend my rotation as much as possible and split spring to winter cropping by 50:50, to allow for as much cover cropping as possible. It's the cover cropping that is key to the system and this brings in the variety of plants above and roots below the soil.

Companion cropping is important, particularly in OSR, where I grow white, berseem and crimson clover in the crop, to take it through. Nature doesn't monocrop and plant diversity is key.

3. Should regen ag be certified?

SUSAN TWINING: At the CLA, we have looked closely at this, and decided that it is not something that we would advocate for at this stage, if ever. Regen farming is about a set of principles which allows for flexibility, depending on the farming situation etc. In certifying this, it would become a tick box exercise - which makes it a completely different concept.

ELMS offer a good suite of options to reward farmers for good practise. We already have the Soils SFI, the IPM, and Nutrient Management SFI's coming out later this year.

SUSAN TWINING

Scan the QR Code to watch the video

Limagrain UK's Denmark Trip

In the spring, Limagrain took a group of UK growers to Denmark, to look at regenerative and conservation agricultural practices.

After two full days of visiting farms, agronomy companies and a plant breeder, there was some very interesting and surprising feedback:

GEORGE ATKINSON, LINCOLNSHIRE: "It's been fascinating to see all the different farming systems, and also learn about Danish policies that contradict themselves. I was expecting to come and see the future, but some of the growers are where we were 15 to 20 years ago."

AL BROOKS, HAMPSHIRE: "I came here with a preconceived idea that we were going to learn something from the Danes in terms of their view towards conservation and regenerative agriculture. I was stunned by the amount of red tape they are subjected to. They are constricted in the industry and don't have the voice with government."

LIMAGRAIN GROUP TOUR

TIM PARTON, STAFFORDSHIRE: "I think the government advisors in Denmark need to take a real hard look at what they are trying to achieve, and what their directives are. They are so restrictive; they are missing out on the big benefits they could be getting from regenerative and conservation agriculture. They need to help their farmers more, rather than restrict them."

> "I think the government advisors in Denmark need to help their farmers more, rather than restrict them."

TIM PARTON

"Discovering that UK farming practice with regards to conservation agriculture or regen is ahead of Denmark, was a surprise to many on the trip, and a real positive take home message for the UK. It's very noticeable that plant breeding is paramount to the future direction of agriculture, as practices move towards lower input and better disease resistances. Limagrain look forward to sharing what we do with growers from the UK and abroad," says Tom Barker of Limagrain, who hosted the trip.

REASONS TO ESTABLISH A LEGUME FALLOW

JOHN SPENCE
Forage Crops
Product Manager

January 2023 saw six new Sustainable Farm Incentive (SFI) standards published, to add to the three existing standards introduced in 2022.

These new standards add a further 19 "actions" that aim to encourage sustainable practices and importantly, increase the number of ways farmers in England can help mitigate the reduction in Basic Payment Scheme (BPS) payments.

For arable farmers, it's likely that one of the "actions" with the biggest uptake will be to "Establish and maintain a legume fallow", as its aims and benefits are virtually identical to the already popular "AB15: Two-year sown legume fallow" option in Countryside Stewardship.

LG Legume 2 meets the requirement for the SFI 'establish and maintain a legume fallow' action.

The action pays £593/Ha (the same as AB15) and aims to provide food for pollinators and farmland birds whilst helping to support an integrated pest management (IPM) approach. We know from experience with AB15 that sowing a seed mixture such as LG Legume 2 which meets the required specification, can be a great tool to help reduce black-grass populations, increase fertility, soil organic matter (SOM) and improve soil structure.

> "The action pays £593/Ha and aims to provide food for pollinators and farmland birds whilst helping to support an IPM approach."

Ensuring these benefits are realised to their full does, however, require the same attention to detail as any other crop.

Reducing black-grass populations is reliant on ensuring that no new seed is shed for the 2-year duration of the mixture. Under both schemes, the mix can be cut for the purpose of controlling black-grass which in practice will be 2-3 mowings, timed so that the black-grass has headed and flowered, but not yet produced viable seed. With correct management, the black-grass seed bank can be expected to reduce by 70-80% per year.

The legumes within the mix will of course fix atmospheric nitrogen, so there's no need to apply any fertiliser and there should be significant residual nitrogen remaining for the following crop. It is, however, worth thinking further ahead as ideally there should be a 5-year gap before any pulses are grown, to avoid potential foot rot or nematode issues.

Mixture choice is also very important. The legume fallow mixture can be selected with or without grass (perennial ryegrass), with the correct choice coming down to individual circumstances. A mix with grass will more successfully smother both black-grass and broad-leaved weeds, and is likely to contribute more SOM than without. Mowing the mixture to control black-grass will also ensure that no ryegrass seed is returned to the soil, but those without black-grass problems may be best with a no grass mixture, to avoid future problems with weed ryegrass.

Whichever mix is chosen, sowing should happen as soon as possible after harvest - ideally in August, to make the most of warm soil temperatures.

CANDIDATE CORNER

LIAM WILKINSON
Oilseed Rape
Product Manager

Over the last 4 years, we have seen the LG Oilseed Rape portfolio dominate the Recommended List, and the consistency of on-farm performance for many growers has been witnessed, with Aurelia and Ambassador becoming dependable staple varieties. This strength in depth of the portfolio continues to progress, as we have four Candidate varieties available this autumn: LG Armada, LG Academic, LG Adeline and LG Aphrodite.

In a time when it would appear that the Recommended List is looking to be condensed, it is really encouraging to see the depth in our portfolio continues to produce varieties, with LG getting 4 Candidate varieties based on their NL performance; this is more than any other breeder.

The four varieties are all fully loaded hybrids, meaning that they encompass LG's trait stacking approach to help mitigate risk for growers, by having the combination of TuYV resistance and pod-shatter, along with solid disease resistances.

LG Armada, **LG Adeline** and **LG Academic** all possess the new **'Stem Health'** tag. This means that from our breeding trials across the UK and Europe, the three varieties have shown consistently strong levels or resistance to phoma stem canker, cylindrosporium and verticillium wilt.

Cylindrosporium is the stem-based symptoms of light leaf spot which, if bad, can cause early senescence, reduced oils and yield.

As a result of improved stem health, these new hybrids have increased oil contents as well as more resilience towards the end of the growing season, due to the better translocation of water and nutrients to the pods.

Breeder's Perspective Q&A

Coretta Kloeppel - OSR Hybrid Breeder

Q What is the main aim of the LG breeding programme?

The main aim of the LG breeding programme is to secure and achieve high yields for farmers. Through stacking traits and maximising disease resistances, we look to reduce as much risk for growers as possible.

Q How important is the UK to the wider European breeding team?

The UK is integral to the European programme. It is where all initial crosses take place - every European variety begins its life in Lincolnshire. It is also very important for disease screening. The LLS screening we carry out in Scotland, along with the Verticillium Trials in Suffolk, all help provide data for the UK, but also feed into the wider European datasets. This helps us to build a full picture and ensure disease resistances are robust.

Q What are the main threats to UK OSR growers and how are we looking to help mitigate against them?

Cabbage Flea Beetle is the obvious one. We have already started by prioritising spring and autumn vigour when selecting varieties, but we are also looking for ideotypes which may be more resilient, as well as being involved in numerous research projects. There is no silver bullet, but marginal gains can certainly help. We are also looking at Clubroot varieties as well as looking more into the importance of Verticillium.

Q What is the most important trait in OSR?

There is no one important trait - from what we have seen, the combination is the most important. So TuYV is crucial for all-round plant health and maximising yield, whereas Pod Shatter ensures that as much of what is produced by the plant ends up in the shed to be sold.

STACK THE ODDS IN YOUR FAVOUR

LIAM WILKINSON
Oilseed Rape
Product Manager

Since the introduction of Aurelia and Ambassador, LG's OSR portfolio has dominated the Recommended List. This not only shows the high yields that the breeders have been able to achieve, but also the consistency over regions and seasons.

This consistency comes from the LG approach towards stacking traits including pod shatter, TuYV and disease resistance and latterly the introduction of the 'Stem Health' concept.

As breeders, we always look for the extremes to put our genetics to the test, to ensure that they are robust and do what they say they will on- farm. Whilst we breed for the UK market, our European programme allows us to screen across the continent, looking at Phoma, Light Leaf Spot and Verticillium as well as the ability to compare against UK data, which gives us confidence that varieties will perform.

This has not only been seen on-farm in the UK, but also in Ireland where the resurgence of oilseed rape as a break crop has partly been due to the introduction of genetics, allowing the crop to be more manageable and risk free. Ireland has seen an increase in area of 30% over the last 6 years, with national average yields jumping from 4-4.5 t/ha to 5-5.5 t/ha.

JOHN DUNNE

John Dunne, cereal variety manager for seed supplier Goldcrop, has put this down to the traits available. "It's an essential part of the rotation for many, so having 'stacked traits' to secure its future place here is important."

As breeders, we have long seen the importance of genetic resistance in Ireland, across all species, where the wet and mild climate causes high disease pressure.

In wheat breeding, all breeders screen for *Septoria* resistance, and in Ireland due to the climate, Light Leaf Spot is of similar importance in OSR. "LLS has always been the tougher beast, to my mind, and in some years, the circumstances play into it with higher pressures, especially when there are nearby OSR stubbles. As the disease cycles so frequently and repeatedly, it can be hard to control," says John. And with these pressures, we have seen the LG varieties rise to the top of the Irish Recommended List, with Ambassador and Aurelia being two of the three Recommended varieties.

Stem health will further add to this, with the reduced sporulation on stems meaning there is a reduced 'pool' of LLS spores to spread from stubbles to early sown crops. Early results from testing suggest that varieties such as LG Auckland and LG Armada are again raising the bar in terms of yield and stability for Irish growers.

Limagrain Establishment Expert Panel

Limagrain UK's oilseed rape establishment expert panel discussion, aims to answer all OSR growers' questions.

The panel discusses all matters regarding OSR, including Cabbage Stem Flea Beetle, how Limagrain UK are stacking traits into oilseed rape varieties, Phoma tolerance, Pod Shatter, Stem Health, nitrogen use and vigour.

Scan the QR Code to watch the video

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