66 There's more to making the right choice than just yield. **99**

Wheats to withstand

Technical Cereal varieties

Resilience is increasingly becoming a key requirement for growers when choosing a wheat variety. *CPM* asks Frontier's Chris Piggott for his top six choices.

By Charlotte Cunningham

A variable climate has always meant agronomic features rank high as a consideration for UK cereal growers when picking out cereal varieties. Greater cropped areas to cover, the rise of fungicide resistance and a slimmer choice in the chemistry toolbox have only served to increase the need for robust wheat varieties, with farmers seeing resilience as a measure of consistency.

"The seasons we get now vary greatly, and varieties need to be able to cope with a number of different factors, such as climate," explains Chris Piggott, Frontier Agriculture. "There's more to making the right choice than just yield."

But there's a large number of wheat options on the AHDB Recommended List, so selecting the most resilient varieties can be a difficult task. Chris notes his top six resilient varieties and explains how growers could benefit from including them in their cropping plans.

KWS Zyatt

"Zyatt had a very good year last year, achieving 5.4% of certified market sales," says Chris. "Being a Group 1, it's very flexible in terms of marketing potential."

With a good protein content, millers can use the variety for a whole range of products, meaning they can easily maintain demand from consumers, he adds.

The variety, from KWS, sits at the top of the table in the Group 1s with a treated yield of 102%. Perhaps more interestingly, it also trumps other varieties in terms of its untreated yield. "The stand-out feature of Zyatt is that it has the joint highest untreated yield on the RL," he adds. "A strong untreated yield has a huge impact on risk management."

In terms of agronomics, Zyatt offers an exceptionally strong package, with good resistance to lodging without PGR and no obvious issues with sprouting, he adds. "In our own trials, we've seen it come to harvest slightly earlier than other Group 1 varieties, so it's more suited to those looking to make an early start to harvest."

Disease resistance is a major area for consideration when it comes to comparing resilient wheats. "Zyatt is good on septoria at 6.2. It's not the best in its class for disease resistance but there are certainly no glaring weaknesses," says Chris. "It also benefits from the Pch1 resistance gene to eyespot, meaning it performs well as a second wheat — it really does tick all the boxes."

The variety has showed no regional preference, performing well across the UK. "Areas to watch are Hagberg and specific weight. While it's on par with others in the group, growers need to be aware and ensure an early harvest to get the grain quality." ►



The stand-out feature of Zyatt is that it has the joint highest untreated yield on the RL.

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Cereal varieties



Wheat varieties need to be able to cope with a number of different factors, such as climate, says Chris Piggott.

► Since its addition to the RL, Zyatt has received tremendous support, says Will Compson, KWS. "Zyatt arrived as the highest yielding Group 1 with excellent all-round disease resistance, especially to *Septoria tritici*, which partly explains its very high untreated yield. What marks it out as a resilient variety is its early maturity which is crucial for quality wheats to protect grain quality"

KWS Siskin

Commanding 8.6% of the market share last year, the reasons for growing Siskin are becoming stronger, says Chris. "The demand for KWS Siskin is increasing as it has a unique position in the market with lots of options."

Because of its market flexibility, Siskin looks to be a replacement for Cordiale, he adds. "It's a good option for millers whether it hits the higher or lower end of the protein potential. This means there's a fall back, as the variety copes well with whatever happens in that year."

The variety scores a 6.9 for septoria, top of the table in the Group 2 market and one of the highest scores on the RL. "In our own untreated trials, Siskin has dealt with septoria better than any other variety," he adds.

Siskin also tops the table for its mildew and yellow rust resistance, with scores of 9 for both, and scores a 5 for eyespot resistance — on a par with other varieties in the Group 2 market. "Siskin doesn't benefit from orange wheat blossom midge resistance; however, it doesn't seem to be reported much at the moment."

In terms of establishment, Siskin is well suited to later drilling, helping growers tackle blackgrass issues. "Siskin goes from drilling to GS32 quicker than any other variety I've seen," he adds.

Siskin is the second most widely grown

The wild cards

It's not just about picking newcomers from the RL that look good. In fact, a few other varieties have surprised growers in terms of their resilience, explains Chris.

Costello

Costello, from Senova, is one of the varieties that has done just that. "Although its yield isn't particularly remarkable, and it doesn't have any noticeable outstanding features, Costello's maintenance of grain quality is brilliant."

Costello has a specific weight of 81.1kg/hl and a Hagberg falling number of 336 — the highest in its group on both accounts, he says. "It's a very safe choice and gives consistent results."

KWS Extase

Though still in the candidate stage, KWS Extase looks set to stir things up in terms of resilient wheats. "So far, the potential septoria resistance is better anything we've ever seen before," says Chris. "It also has the highest



With a specific weight of 81.1kg/hl, Costello is a safe choice and gives consistent results.

untreated yield in current National List trials. But, it's still very early days."

The variety has been selected as a potential bread-making variety and current trial results stand at 90% for untreated yields.



The demand for KWS Siskin is increasing as it has a unique position in the market with lots of options.

variety in the UK and combines quality with yield, adds Will. "It fulfils a range of end-user markets and has recently attracted premiums above that paid for other Group 2 varieties. Its exceptional yield also means it can be grown as a high yielding feed wheat."

Agronomically, Siskin is a fast developer but doesn't tiller as well as some of the higher yielding sorts, notes Chris. "We've therefore seen a good response to upping the seed rate if growers are planning to drill Siskin later.

"Siskin is certainly a variety that's here to stay because of its strong end-market demand. There's a very robust argument for everyone to grow Siskin — it has so many positives."

Elicit

Sales in the Group 3 market have been growing recently, with market share increasing from just 3% to around 7%. However, what's been missing are varieties with septoria resistance, says Chris. "When we move away from the East, there's little to no choice for septoria-resistant varieties. While Elicit sits equally in first place for yield, the septoria and yellow rust scores are what sets it apart — it's what the market has been missing for a long time."

Elicit has a good all-round disease package, with a score of 9 for yellow rust, 7 for brown rust and 6.4 for septoria, as well as having orange wheat blossom midge resistance. The variety boasts good performance on light land and seems to do

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Elicit's good septoria and yellow rust scores are what sets it apart from other biscuit wheats .

► well as a second wheat, despite a slightly lower eyespot score, says Chris.

The variety's robust disease resistance contributes to strong untreated yield performance, says Stephen Smith, Elsoms. "Elicit is the first Group 3 variety with very good resistance for a long time. Combined with high yields and good stiff straw, it makes it a very safe option to grow."

In terms of drilling, Elicit is best suited to the main drilling window, between mid-Sept and mid-Oct. "In our own trials, Elicit has shown good northern performance. The indications so far are that it is a good choice for growers in the North, however, it'll be well suited anywhere near a good end market."

RGT Gravity

RGT Gravity, from RAGT Seeds, has been on Frontier's radar since an early look at the variety last year, and it's performed consistently, explains Chris. "Gravity delivers high yield in any rotational position or soil type. At 106% (treated yield) Gravity sits at the top of the yield tree — it's the highest yielding variety on the RL."

Performance on light land is equal to others in the Group 4 market, however,

Resilient wheats at a glance

Variety name	KWS Zyatt	KWS Siskin	Elicit	RGT Gravity	Gleam	KWS Kerrin
nabim group	1	2	3	4 hard	4 hard	4 hard
Treated grain yield (% control)	101.8	102.7	102.5	106.4	105.0	104.7
Untreated yield (% control)	88.6	86.3	85.8	82.6	87.7	82.6
Protein content (%)	11.9	11.5	11.3	11.2	11.0	10.6
Hagberg (seconds)	274	302	206	195	203	139
Specific weight (kg/hl)	78.5	77.7	77.7	76.8	76.6	76.6
Resistance to lodging (with PGR)	8.1	7.1	7.6	7.7	7.6	6.9
Disease resistance						
Mildew	7.2	8.5	5.7	4.2	6.1	6.9
Yellow rust	7.2	8.7	8.8	8.3	7.0	6.8
Brown rust	6.0	5.3	6.9	6.3	5.5	6.9
Septoria tritici	6.2	6.9	6.4	5.2	6.2	5.3
Eyespot	7@	4.5	[4]	[4]	[5]	4.6
Fusarium	[6]	5.4	[6]	[6]	[6]	[6]
Orange Wheat Blossom Midge	-	-	R	R	R	R

Source: 2018/19 winter wheat AHDB Cereals and Oilseed Recommended List; R = believed to be resistant to orange wheat blossom midge (OWBM) but this hasn't been verified in Recommended List tests; @ = believed to carry the Pch1 Rendezvous resistance gene to eyespot but this hasn't been verified in Recommended List tests

G



Sitting at the top of the RL, Gravity delivers high yield in any rotational position or soil type.

Gravity benefits from a particularly strong northern yield (106%) again, placing it at the top of the table, he adds.

Turning to agronomics, Gravity tillers well and is fast developing. "Gravity is best suited to late drilling, it's important not to drill before the end of Sept."

While later drilling can be beneficial for blackgrass control, the variety performs well even if other factors — such as blackgrass populations and sowing date — are compromised, notes Chris. "Gravity has the resilience to deal with other issues."

Looking at disease resistance, Gravity's performance isn't quite so strong, being susceptible to mildew — with a score of 4 — and 5.2 for septoria. But the variety boasts a score of 8 for yellow rust.

Gravity was the first variety from RAGT to be recommended using genomic selection and was the highest yielding variety in all years of official testing, explains Tom Dummett, RAGT. "Gravity is a high tillering variety which is why it has been so consistently high yielding in variable conditions. Having this ability to compensate and be top in all but early sowing situations, should give growers the confidence in how resilient the variety is."

Gleam

Also from the Group 4 market, Syngenta's Gleam is a firm favourite for Chris. "Gleam is high yielding, with 105% of treated controls. For such a high yielding variety, it comes to maturity very early meaning it doesn't delay harvest, which makes it fairly unique."

It has a good balance of disease, with nothing scoring below a 5, he adds, and a score of 6.2 for septoria. "Gleam also has orange wheat blossom midge resistance which is really good, and performs well as a second wheat, with a score of 5 for eyespot."

Gleam isn't as fast to develop as other varieties, so is suited more to early drilling, explains ►

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A Santiago cross, Kerrin is higher yielding than its parent and offers a better all-round combination of disease resistances.

 Chris. "Gleam is a Hereford cross, so it benefits from good root structure. It performs particularly well on heavier land - which is unusual given the rooting but it's also equal top in terms of Eastern region yield."

One of the key features of Gleam is its adaptability, says Samantha Brooke, seed and seed treatment manager at Syngenta. "Gleam is able to both produce and maintain tillers and it doesn't lose any over the winter. It also comes to harvest early which really helps to spread workloads for farmers."

Looking forward, there's enough seed



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available for Gleam to claim 5% of the market share this year and supplies are anticipated to be in high demand, adds Samantha. "It has proved consistent in trials year-to-year and across all regions. While it's early days, seed growers have been very impressed. Gleam is a great variety to have in the mix to help spread risk."

KWS Kerrin

While not a newcomer on the RL, growers have had very good experience with Kerrin from KWS. "Kerrin secured 5.6% market share last year and was also the highest yielding Group 4," says Chris. "There are some very strong crops in the ground this year — Kerrin looks very promising again."

The variety draws high tillering from its Santiago parentage and is well suited to later drilling - helping to tackle any blackgrass issues. "Kerrin has excelled on light land in terms of yield," he adds. "It also performs well as a second wheat - similarly to Gleam — and has no real disease issues. There's no obvious areas where the variety falls down. It's a solid all-rounder."

Will also credits Kerrin's parentage to its high performance. "A Santiago cross, it is higher yielding than its parent and offers a better all-round combination of disease resistances, especially to Septoria tritici, with a score of 5.3."

As well as performing on light land, Kerrin is an ideal choice for northern growers and, more generally, those who are looking for something that's very high yielding. "It does have a slightly lower Hagberg number, meaning sprouting could potentially be an issue — but it isn't an area of concern as it has been similar to Santiago," says Chris. "This variety is all about filling sheds with a high yielding wheat. There are no concerns over quality."



Gleam combines high yield with a variety that comes to maturity very early.



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