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## Insiders View

# Bairstow, howzat?

**Whoever at RAGT is a fan of cricket, they seem determined to pull together a winning team. Soft Group 4 variety RGT Bairstow looks to be a winner and CPM has front row tickets to see how it performs.**

*By Melanie Jenkins*

**Joining the ranks at RAGT is RGT Bairstow, which has bowled its way to the top of the soft Group 4s on AHDB’s Recommended List (RL) and, like its cricketer counterpart, RAGT is likely hoping it can achieve notable success.**

A consistently high yielder across all regions, with a strong all-round disease package — including OWBM resistance — and very high alcohol yields, Bairstow is suited to a wide range of growing systems, according to RAGT breeder, David Schafer.

The latest RL has seen two new soft Group 4s added this year, both coming from RAGT, says the firm’s Tom Dummett. “Previously we had RGT Saki — which is still a very useful variety — but Bairstow and RGT Stokes are the next generation on.

“Bairstow’s yield hardly deviates from its own yield mean,” he explains. “It goes from 102% to 104% in its spread of yield results — something few other varieties do. It can be grown further north and its alcohol yield/ha means it has good

environmentally friendly credentials.”

Wynnstay has had an interest in Bairstow for a while now, according to the company’s Nigel Britland. “We watched it go through AHDB screening for a few years and it’s been at the forefront, showing a lot of promise. It’s pleasing it got on the RL as it looks such a versatile variety.”

### Consistent performer

Bairstow’s agronomic package of disease resistance is what originally drew Frontier Agriculture to it, says Chris Piggott. “Not one disease element is a problem for it, which is reflected in its regional yield results in AHDB and our own trials. At most of our main sites, it’s been in the top third of varieties and nothing seems to pull it down.”

It’s a variety that has performed consistently across regions, soil types, geography and drilling dates, he adds. “I don’t think Bairstow has a particular affiliation for heavy or light land, north or south and this is reflected in AHDB’s data.”

Bairstow’s versatility will appeal to growers, says Nigel. “As a strong first or second wheat, with a good Hagberg and resistance to sprouting, Bairstow’s going to be one that will compete with its better-known Group 4 contemporaries.”

Another thing that became evident to Chris from Frontier’s trials was how strong Bairstow’s specific weight was moving northwards. “It was very strong the further north our trials went, and it remained so in untreated situations.”

Bairstow is a three-way cross of Revelation, Santiago and Cougar, explains David. “It was identified as a favourable

combination in 2013 and accelerated through our breeding programme’s single seed descent systems.”

Revelation and Cougar provided a diverse septoria resistance base, with Cougar also conveying multigenic yellow rust resistances. Santiago was the heavy yield contributor, while Revelation also brought in the distilling quality of Bairstow, he explains.

But it can’t be omitted that some growers may be looking at the Cougar in Bairstow’s parentage and feeling concerned about the resilience of its septoria resistance, but RAGT assures growers that the variety came out of last year’s septoria nightmare strongly.

“It’s been a difficult story for a number of varieties with Cougar in their parentage,” says David. “Bairstow was tested in the same locations as varieties such as Firefly — which now have much weaker ratings — and it hasn’t seen the same ▶



*RGT Bairstow is the next level up from RGT Saki, according to Tom Dummett.*

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Chris Piggott believes that Bairstow is agronomically sound, with no single disease element causing it a problem

► susceptibilities. This was a very good result and encouraging to observe in a tough season.”

Even after last year’s horrendously bad septoria year, where varieties known for their septoria resistance — with and without Cougar in their parentage — lost half a point from their resistance scores, Bairstow fluctuated little, confirms Tom.

Because of its relatively strong septoria and yellow rust scores, there isn’t really anything other than its eyespot score that

could potentially pull the average yield down, says Chris. “It’s not anything we’re hugely concerned about though.”

Nigel recommends a full growth regulator programme for Bairstow. “It has a standing score of 6, which means the variety will require a full PGR programme in spring, with particular attention paid to that aspect,” he suggests.

David is encouraged by Bairstow’s regional stability and says it has done well in second wheat trials.

The new variety has a wide drilling window, but Tom advises not going too early with it, instead aiming for the main and later sowing dates, from 25 September through to the mid or end of February. “It has a fairly low vernalisation requirement, so drilling date is quite flexible.”

Bairstow’s likely to suit those growing a varied selection of varieties, explains Chris. “The slightly later maturity of Bairstow means it’ll be a good fit for growers wanting to split maturity and there aren’t a huge number of highly disease resistant varieties with later maturity.”

He assures anyone concerned that later maturity may mean late harvesting that this isn’t because it has a long growing season. “It’s certainly not the latest harvesting or longest growing variety so doesn’t need drilling early.”

Once established, Bairstow has an intermediate growth habit, says David. It has a moderate to fast speed of development but isn’t as fast as

## Bairstow at a glance

### Yield (% treated controls)

|                     |       |
|---------------------|-------|
| UK treated          | 103.1 |
| UK untreated        | 84.6  |
| East region treated | 103.3 |
| West region treated | 102.9 |

### Disease

|             |     |
|-------------|-----|
| Mildew      | 6   |
| Yellow rust | 7.1 |
| Brown rust  | 6.3 |
| Septoria    | 6.4 |
| OWBM        | R   |

### Agronomy

|                             |      |
|-----------------------------|------|
| Lodging (% + PGR)           | 6.3  |
| Height (cm)                 | 91   |
| Ripening days (+/- Skyfall) | +2   |
| Specific weight (kg/hl)     | 75.6 |
| Protein content (%)         | 11.2 |
| Hagberg falling number      | 228  |

Source: AHDB Recommended List, winter wheat 2022/23

Skyscraper and doesn’t fly through the winter. Instead, it slows itself and reaches GS32 at a reasonable time.

“But once that happens, the variety then accelerates and is a very high tillering type, with a leafy canopy and good-sized ears, reaching heading quite early — similar to Gleam and Skyscraper.”

Whereas Cougar derived material can often produce club ears which stifle

## Bairstow test series

Growing Bairstow for the second year, Andrew Cawood likes varieties with good disease resistance, which are all-round yielders. Farming 250ha at Burley House Farm, Selby in North Yorkshire, his land includes both light and heavy soils on top of magnesium limestone. This has a high pH and high magnesium so he has to contend with lock-up of various nutrients.

Aiming for a seven-year rotation, he has wheat, winter and spring barley, oilseed rape, peas and potatoes and is trying grain rye for the first time this year. “It’s always a toss-up if I go for a second wheat, a winter or spring barley or rye in the second cereal spot.”

As part of RAGT’s Growers Club, Andrew was offered seed in 2020 but he wasn’t able to drill it until 24 November that autumn. “Bairstow went into the ground we had left, and we could only drill the middle of the field because of the conditions.”

Although he drilled a high seed rate of 461 seeds/m<sup>2</sup> and applied 196kgN/ha, due to

the late establishment and difficult conditions the crop only achieved 6.5t/ha. This was below the farm average of 10.25t/ha.

“It went in too late and wet, which is why I didn’t drill the headland,” he explains. “I don’t think it was a fair reflection on the variety as the situation wasn’t ideal.”

He now has another crop of Bairstow in the ground and feels this year he’ll get a proper answer about its capabilities. He has planted the variety in two fields following potatoes, which were drilled on 22 September 2021 at 325 seeds/m<sup>2</sup> and in another field in a second wheat position, which was drilled on 8 October at 397 seeds/m<sup>2</sup>.

Andrew ploughed the second wheat field to get rid of volunteers and any disease inoculum and top-downed and rolled the potato fields, then drilled all of them with his Amazone combination.

“I’m not sure what I will do with my fertiliser regime this year — I’ve been taking soil



Growing Bairstow for the second year in a row, Andrew Cawood is optimistic about its potential.

samples and hopefully I can knock back on nitrogen a bit, but I can put N on normally as I bought stock last summer at £300/t,” he says.

“All the crops are looking well this season and Bairstow has come out of winter looking very good.”

specific weight, Bairstow has a slightly laxer ear, likely aiding specific weight uplift, adds David. "It has a long grain fill window, which is very interesting as it's something we like to see to help build yield."

Looking at the soft wheat market at present, Skyscraper sits in third position for market share, taking around 10% of the market, according to Tom. "Bairstow is likely to take the same percentage share in time and there's enough in the ground at the moment to fulfil 3-5% in the coming season."

"We released some seed to our Growers Club members and the feedback was really strong. The seed crops yielded really well in what was a difficult season, where some crops underperformed," he says.

"If you want to get hold of some seed, book it early. There will be a nice amount for people to try and get their teeth into," adds Tom.

Nigel says that Wynnstay has had a few enquiries about Bairstow and thinks when growers see it at demo days and events, there will be more interest. "I suspect there'll be more demand than supply. A lot of growers will look to try it this year and see how it performs under their management schemes and because of its scoring on the RL, it will likely be here for a while," he adds.

Chris seconds this. "Although the soft wheat market is smaller than for other wheat groups, I think Bairstow has potential to take market share from some of the big varieties, especially as it offers opportunities in the distilling market, and maybe even in biscuit grist blends and export. Bairstow could have full UK-wide interest."

Bairstow has been proven to have a



*James Brosnan has seen Bairstow since National List 1 trials, where its alcohol yield was above the control variety.*

strong alcohol yield, according to Tom. This was backed up by the Scotch Whisky Research Institute (SWRI). The key requirements for grain distilling are that a variety has a high alcohol yield (measured as litres of alcohol/tonne) and that it will process efficiently, explains James Brosnan of SWRI.

Working with the British Society of Plant Breeders, SWRI screens newer varieties as they come up through National List and AHDB trials. "We saw Bairstow at NL1 and could compare it with established control varieties."

## Alcohol yield

Though grain distilleries use thousands of tonnes of wheat a week, SWRI has a small-scale testing method to determine a variety's suitability for distilling. Using a 50g sample at the same temperatures as would be used in a distillery, the method looks at breaking starch down to fermentable sugars.

"We cook the wheat, cool it and add high enzyme malted barley to break down the starch," says James. "Then we ferment this with a yeast strain for three days and, distil it in a lab to obtain the amount of alcohol it can produce."

Viscosity is another aspect that has to be tested, he explains. "To test this the residue left from distilling — a brown syrup — is measured. If it has a high viscosity, then there are potential processing problems when used at scale," he explains. "High viscosity used to be a major problem in UK wheat varieties but it's rare to see now."

At NL1, Bairstow's alcohol yield was a bit above the control variety, says James. "At NL2, we analyse again and in Bairstow's case, it did a little better. So with two years of limited data, we saw consistency and a promising alcohol yield."

SWRI then follows varieties as they go into RL trials. "In 2021, Bairstow showed it was at the top end for alcohol yield of 13 varieties in the sample set, across six trial sites. It was in the top five at every site and in the top three at four sites," explains James.

"With my distiller's hat on, I could rate it as good for distilling, similar to varieties such as Swallow, Elation and Elicit," he adds.

Because of Bairstow's distilling potential and its wide sowing window, it has a niche akin to that of Skyscraper and is suitable in northern environments, says David.

"Growers selecting these Group 4 soft wheats ought to be looking at Bairstow. We



*According to Nigel Britland, Bairstow will go on to compete with its better-known Group 4 contemporaries.*

see it as a Saki-plus — with a maintained septoria resistance."

Because of the past few difficult seasons, more growers are open to having different types of varieties on farm, says Chris. "We've certainly seen more interest in newer varieties. To see a variety outyielding Skyscraper, with disease resistance too, is very impressive and great progress from the plant breeder." ■



*Bairstow is a three-way cross of Revelation, Santiago and Cougar.*



*Bairstow has shown regional stability and has done well in second wheat trials.*