

Stamp of approval

“It remains vital that new genetics are constantly brought to market.”

Sugar beet varieties

At the beginning of April, BBRO and BSPB announced the new Recommended List for sugar beet, which saw nine new varieties added and four withdrawn. *CPM* reports.

By Lucy de la Pasture

The new graduates to the BBRO/BSPB Recommended List offer more choice at a time when variety selection goes hand in hand to help counter some of the pest and disease problems when growing a crop with a decreasing range of pesticide solutions.

While yield is still an important trait, it's no longer the only consideration in a more integrated approach to planning the next crop. Ongoing investment in research and development is bringing new varieties to improve pest and disease resistance while also increasing yields, says BSPB chief executive, Sam Brooke.

“Plant breeders have also demonstrated these varieties can improve nitrogen and water use efficiency. These benefits all count towards ensuring the resilience of UK domestic sugar production in the coming years.

“In what's been a challenging couple of years, it remains vital that new genetics are constantly brought to market to help growers increase yields by tackling diseases such as virus yellows. Nine new varieties have been added to the Recommended List this year, complementing the 13 proven varieties already on the list. This is testament to the tenacity of plant breeders and their ability to address the issues and concerns of sugar beet growers throughout the UK.”

Improved genetics

The National List and Recommended List are now administered separately to encourage new and improved genetics to reach the UK market as quickly as possible. “By breeding varieties that can increase yields, whilst reducing our reliance on the use of chemistry and nitrogen, we can help to reduce costs and safeguard UK sugar beet production.

“More robust varieties will help to challenge diseases, but breeders need the security that the UK market can be sustainable in order to continue the high level of investment in R&D,” she adds.

In yield order, the new additions are Harryetta KWS, Annatina KWS, BTS3610, Morgan, Stewart, Tawny, Adder, Button and BTS Smart 9485 and the 2023 list now has 22 varieties for growers to ponder.

The headline new trait additions are found in Button and Harryetta KWS (the second

highest yielding variety on the list), which are tolerant to BCN, and BTS Smart 9485, which is the first ALS-herbicide tolerant variety from Limagrain.

Mike May, chairman of the RL board, gives a brief summary of the trials in 2021, which he says were an improvement on the 2020 season, when trials were badly hit by virus yellows. As a result, the yield of the control varieties in 2021 was 112.0 adjusted tonnes/ha compared with 105.8 in 2020. ►



Mark Culloden says all three Strube varieties, Morgan, Stewart and Button, have performed consistently and reliably during the challenging growing conditions in the UK over the past three seasons.



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Threshold: One green wingless aphid per four plants

Andrew Dear, head of agronomy at British Sugar

Winged and wingless aphid numbers are increasing in UK sugar beet crops across all beet growing areas, particularly in non-Cruiser SB treated crops.

The British Beet Research Organisation's (BBRO) aphid monitoring network is now active – agronomists and growers are invited to register to BBROplus via the BBRO website to see the aphid survey data and aphid distribution maps.

BBRO advises checking all non-Cruiser treated crops as a priority and consider spraying only if the aphid threshold of one green wingless aphid per four plants is exceeded.

Where plants are still emerging or are very small (cotyledon/1-2 true leaves) you might want to consider the timing of the first application to ensure there is sufficient leaf area to maximise the efficacy and uptake of the aphicide on the plant. However, this is a difficult judgement call and should be viewed on a field-by-field basis. Don't apply too early and use up one of your permitted foliar applications.

For non-Cruiser treated crops two sprays are currently approved: flonicamid and acetamiprid, and these can be applied in any order. If there comes a need to spray Cruiser SB treated crops (if above the threshold) you must start with flonicamid (Teppeki or Afinto).

Now is critical time to remove any potential sources of virus on farm. Check and destroy any leaf growth on spoil heaps, clamps and groundkeepers (i.e. beet regrowth).



Andrew joined British Sugar in 1996 based in the trials team at Holmewood Hall before becoming an area manager supporting growers for Bardney, Newark and York factories. He moved into agriculture operations and business manager roles at Wissington and Cantley before becoming head of agriculture at Bury St Edmunds and Cantley. Today, Andrew is head of agronomy, managing the national seed account in conjunction with the NFU. He is also on the British Beet Research Organisation Stakeholder Committee.



Haryetta KWS and Annatina KWS both offer low bolting when sown in the normal (mid-March) sowing window, says Ben Bishop.

► "The weather after drilling led to varying emergence and two trials were lost because of uneven stands. The number of bolters from early sown trials was higher than in 2020, but lower than 2019, while the normal sown trials (drilled after mid-March) had similar or lower bolting than the previous two years," he says.

"The autumn weather was generally good, but it was still wet at times so a careful watch was required to ensure trials were harvested under good conditions."

Looking at the new variety additions in more detail, three come from the Strube stable. "All of these varieties have successfully come through the comprehensive UK trials programme," says Mark Culloden, managing director at Strube UK. "They've performed consistently and reliably during the challenging growing conditions we've experienced in the UK over the past three seasons and all three varieties are rhizomania resistant."

Topping the yield of the three Strube additions is Morgan which Mark says performs well on all soil types with good sugar yields and good establishment. "It also has good sugar contents and a larger top for full crop canopy coverage.

"Stewart is also a good all-round performer, with good sugar yields and above average sugar content and it's suitable for early drilling with low bolting figures," he comments.

Bringing BCN tolerance to the field is Button, says Mark. "It's performed well in other EU countries where BCN is a bigger problem than here in the UK and it has very low early and normal sown bolting figures with one of the highest establishment scores on the RL."

Stalwart breeder KWS has two new additions to the RL. Of these, Haryetta KWS has the combination of characteristics that will earn it a place on every farm, believes Ben Bishop, UK country manager for KWS.

BCN tolerance

"As the highest-yielding BCN tolerant variety on the 2023 RL and with strong all-round disease resistance, Haryetta KWS gives growers an appealing third BCN tolerant choice alongside other KWS varieties Daphna and Katjana KWS," he says. Lacewing, added in 2020 and new addition Button also offer BCN tolerance.

A low bolting score of 15 in the normal sowing window and an establishment score of 98.3% underlines its broad appeal, he suggests.

"On all the important metrics, Haryetta KWS is a strong contender that will help growers spread the variety risk without compromising yield potential or the need to accept poor disease resistance," adds Ben.

The second addition from the breeder, Annatina KWS, offers a sugar content of 17.4%, the joint second highest on the list, and zero bolters in the normal sowing window.

"At 102.1% of controls, Annatina KWS is low-risk variety with good resistance to rust and cercospora leaf spot. It's another sound choice for those wanting a dependable, low-risk and yet high-yielding variety," he says.

If you have any questions, please contact your British Sugar contract manager. You can also read the British Beet Research Organisation's advisory bulletins at www.bbroy.co.uk



Limagrain UK also has two additions to the 2023 RL. These two very different varieties reflect the breadth of the Betaseed breeding approach of producing varieties that today's growers are looking for, offering good security for on-farm performance, says Ron Granger, arable technical manager for Limagrain UK.

He believes BTS 3610 offers one of the best all-round packages for delivering on-farm performance through a



Adder and Tawny are graduates from SESVanderHave's extensive UK trials which seek to mirror commercial practice, says Ian Munnery.

combination of a competitive yield, a high sugar content and good disease resistance, whereas BTS SMART 9485 is the highest yielding ALS herbicide resistant variety — a step up over current ALS genetics.

"While BTS 3610 sits in the pack for top yielders at 101.6% (adjusted tonnes) and has one of the highest sugar contents of 17.3%, this variety is about more than just yields," says Ron.

"We know growers are increasingly looking for on-farm security in the varieties they choose to grow, and to offer this a variety must have the right combination of agronomics and a robust disease resistance profile.

"With BTS 3610, this is exactly what is on offer — it has a very good disease resistance package with a rating of 5.9 for rust, 5.3 for powdery mildew and a 6.6 for cercospora. This robust disease resistance package is backed up by its high untreated yield of 101.2% in trials — demonstrating breeders focus on producing more resilient varieties for the marketplace."

BTS 3610 has a flexible drilling window, suitable for both the earlier and normal drilling dates and is rhizomania tolerant.



Ron Granger believes BTS 3610 offers one of the best all-round packages for delivering on-farm performance through a combination of a competitive yield, a high sugar content and good disease resistance.

BTS Smart 9485 is Betaseed's first Smart herbicide resistant variety and is the highest yielding variety in this specialist category.

"Its yields of 96% are very encouraging for an ALS-resistant variety, as there's been ►

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Sugar beet varieties

RECOMMENDED LIST OF SUGAR BEET VARIETIES 2023 (Based on trials from 2019-2021)																																																					
R2t rhizomania varieties				Tigoline		BTS1140		Kordia KWS		BTS1915		Harveyella KWS		Kajala KWS		Anastasia KWS		BTS2010		Niren		Morgen		Soleant		Tavny		Evelotti KWS		Adler		BTS2020		BTS1710		Buron		Laceland		Phima KWS		Marschall KWS		BTS Smart 1445		Smart Platan KWS							
Status: (C) = control variety ¹				R(C)		R(C)		R(C)		PR2		PR1		PR2		PR1		PR1		PR2		PR1		PR1		PR1		PR2		PR2		PR1		PR2		PR1		PR2		PR1		PR2											
AYPR/BCN/ALS/VV as claimed by the Breeder				BCN		-		-		-		BCN		BCN		-		-		-		-		-		-		-		-		BCN		BCN		AYPR		V		ALS		ALS											
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Adjusted tonnes % of C=100% ¹				112.2 t/ha		109.0		2.5		101.5		101.1		98.7		107.1		103.5		102.3		102.1		101.4		101.3		101.3		100.7		100.4		100.3		100.1		99.8		99.2		97.3		106.3		102.1		98.9		102.1			
Sugar yield % of C=100% ¹				17.9 t/ha						101.5		101.1		98.7		107.1		103.5		102.3		102.1		101.4		101.3		100.7		100.4		100.3		100.1		99.8		99.2		97.3		106.3		102.1		98.9		102.1					
Root yield % of C=100% ¹				104.3 t/ha						101.8		100.8		98.8		107.1		104.4		102.1		100.7		100.9		100.7		101.8		99.7		102.0		99.5		103.8		98.5		97.7		100.7		94.5		101.1		90.3		97.9		97.8	
Sugar content %				17.1%		0.2		17.1%		17.2		17.1		17.1		17.1		17.0		17.1		17.4		17.3		16.7		17.2		17.3		18.5		17.3		16.8		17.4		17.5		18.9		17.3		17.3		17.4		16.8		17.3	
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► a bit of yield lag to date. It reflects an improvement over current ALS genetics which will be welcome news for growers in this category,” says Ron.

"It has solid on farm characteristics with good bolting resistance. When sown in the early drilled slot before 5 March, it has 2327 bolters and zero in the normal sowing slot.

"BTS Smart 9485 also offers a good disease resistance profile with a 4.9 for rust, 5.9 for powdery mildew and 6 for cercospora. Again, an improvement over

previous varieties that were on the List last season in this category," he says.

From the SesVanderHave stable are new varieties Adder and Tawny. The recommendation reflects the result of a decade of breeding and an extensive UK trials programme where both varieties have delivered consistent and resilient performance, according to Ian Munnery, UK director for the company.

In recent years, extensive field trialling in the UK has sought to mirror commercial practice, he explains. “In our field trials we

use SesVanderHave primed and pelleted seed, drilled to a stand, and integrate different fertiliser regimes and spray programmes. This allows us to screen genetics and seed treatments to help deliver the increasing need for resilience in the sugar beet crop.

"Investment in near infra-red spectroscopy in our mobile tarehouse means we can now analyse sugar content as we harvest, accelerating the selection of promising genetics and keeping down trial costs," he adds. ■

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