

RECOMMENDED LIST OF SUGAR BEET VARIETIES 2023 (Based on trials from 2019-2021)
UNTREATED DATA from 2 trials in 2019, 3 trials in 2020 and 3 trials in 2021

Rz1 rhizomania varieties				Daphna	BTS1140	Kortessa KWS	BTS1915	Harryetta KWS	Katjana KWS	Annatina KWS	BTS3610	Wren	Morgan	Stewart	Tawny	Evalotta KWS	Adder	BTS3020	BTS5770	Button	Lacewing	Philina KWS	Maruscha KWS	BTS Smart 9485	Smart Rixta KWS
Status: (C) = control variety ¹				R(C)	R(C)	R(C)	PR3	PR1	PR2	PR1	PR1	PR2	PR1	PR1	PR1	PR3	PR1	PR2	PR2	PR1	PR3	PS3(C)	PS1	PS1	PS 1
AYPR/BCN/ALS/VY as claimed by the Breeder				BCN	-	-	-	BCN	BCN	-	-	-	-	-	-	-	-	-	-	BCN	BCN	AYPR	V	ALS	ALS
CROP YIELDS	MEAN		95% Isd																						
Adjusted tonnes % of C=100% ²	108.4 t/ha	100.0	4.1	102.5	101.8	101.2	106.5	103.1	101.9	100.7	101.2	99.2	97.4	98.4	99.7	97.8	99.1	99.4	101.9	97.9	95.1	98.4	92.3	95.6	92.6
Sugar yield % of C=100% ²	17.3 t/ha			102.5	101.8	101.2	106.5	103.1	101.9	100.7	101.2	99.2	97.4	98.4	99.7	97.8	99.1	99.4	101.9	97.9	95.1	98.4	92.3	95.6	92.6
Root yield % of C=100% ²	102.1 t/ha			103.2	101.7	100.1	106.5	104.0	101.8	100.4	99.8	102.2	98.0	98.1	101.5	97.9	102.2	97.8	100.1	99.4	94.7	100.4	91.0	98.4	93.2
Sugar content %	16.9%		0.3	16.80	16.97	17.11	16.94	16.79	16.93	16.99	17.16	16.44	16.80	16.99	16.63	16.88	16.42	17.21	17.25	16.66	16.97	16.58	17.19	16.42	16.83
BOLTERS per 100,000 plants/ha	MEAN		99.9% Isd																						
Normal sowing ³	19 /ha		166	0	67	30	94	5	0	5	33	0	28	45	30	40	5	81	0	26	26	0	0	2	35
PRE-GAPPING ESTABLISHMENT ⁴			95% Isd																						
Control	100%	6.8%		100.2	97.7	99.0	101.8	98.0	101.2	91.6	98.4	103.2	100.7	101.7	104.4	100.3	102.0	99.3	99.1	102.7	101.8	103.8	97.3	95.5	103.1
TOTAL MEASURED IMPURITIES (IMP/100G SUGAR)		15% above mean of C																							
Control	3.99	4.59		4.14	3.67	4.20	4.18	3.84	3.39	3.80	3.64	4.30	3.42	3.46	4.20	4.27	4.13	4.08	3.86	3.51	3.85	4.16	4.21	4.03	4.17
RL SYSTEM																									
Year first listed				2017	2018	2018	2020	2022	2021	2022	2022	2021	2022	2022	2022	2020	2022	2021	2021	2022	2020	2018	2021	2022	2021
BREEDER/UK CONTACT ⁵																									
Breeder				KWS	BTS	KWS	BTS	KWS	KWS	KWS	BTS	SV	STR	STR	SV	KWS	SV	BTS	BTS	STR	SV	KWS	KWS	BTS	KWS
UK Agent				KWS	LG	KWS	LG	KWS	KWS	KWS	LG	SV	STR	STR	SV	KWS	SV	LG	LG	STR	SV	KWS	KWS	LG	KWS

Mean of control varieties includes Advena KWS which is no longer listed and Philina KWS which submitted Breeders seed in 2021

¹ Newly listed varieties (PR1/PS1) have results from three years using approximately 2 kgs breeders' seed. Thereafter commercial seed should be used in RL trials. (See supplementary table).

² Yields based on an average plant population of 102,000 plants/ha in these trials. Differences in adjusted tonnes of less than 4.1% should be treated with reserve.

³ The ratings from normal sowings are applicable for sowing after mid-March in most seasons.

⁴ Differences in establishment of less than 6.8% should be treated with reserve.

⁵ BTS = Betaseed, KWS = KWS UK Ltd, LG = Limagrain UK Ltd, STR = Strube UK Ltd, SV = SESVanderHave UK Ltd

RECOMMENDED LIST OF SUGAR BEET VARIETIES 2023 (Based on trials from 2019-2021)

Rz1 rhizomania varieties		3-year data			Daphna	BTS1140	Kortessa KWS	BTS1915	Haryetta KWS	Katiana KWS	Annafina KWS	BTS3610	Wren	Morgan	Stewart	Tawny	Evalotta KWS	Adder	BTS3020	BTS5770	Button	Lacewing	Philina KWS	Maruscha KWS	BTS Smart 9485	Smart Rixta KWS		
STATUS (C) = control variety					R(C)	R(C)	R(C)	PR3	PR1	PR2	PR1	PR1	PR2	PR1	PR1	PR1	PR3	PR1	PR2	PR2	PR1	PR3	PS3(C)	PS1	PS1	PS1		
AYPR/BCN/ALS/VY as claimed by the Breeder					BCN	-	-	-	BCN	BCN	-	-	-	-	-	-	-	-	-	-	BCN	BCN	AYPR	V	ALS	ALS		
ADJUSTED TONNES (Gapped Trials)		T's per ha		Control	95% lsd																							
% Mean of (C)	Mean	108.4	100.0	4.1	102.5	101.8	101.2	106.5	103.1	101.9	100.7	101.2	99.2	97.4	98.4	99.7	97.8	99.1	99.4	101.9	97.9	95.1	98.4	92.3	95.6	92.6		
	2021	113.8			101.2	101.0	100.7	103.8	102.6	101.2	103.0	102.3	99.2	98.5	100.4	98.1	98.3	98.7	96.6	98.3	98.3	94.1	99.5	93.0	94.5	91.8		
	2020	100.5			103.8	102.8	101.5	107.5	104.5	101.9	97.6	101.5	99.8	95.3	94.5	102.6	95.3	101.2	101.2	104.6	94.9	95.3	98.3	95.7	95.1	92.3		
	2019	111.6			102.9	101.6	101.4	109.3	100.9	102.8	101.5	96.8	98.5	99.0	98.7	96.5	100.3	94.4	101.4	103.8	101.4	96.2	96.8	86.5	99.1	94.1		
SUGAR YIELD (Gapped Trials)																												
% Mean of (C)	Mean	17.3			102.5	101.8	101.2	106.5	103.1	101.9	100.7	101.2	99.2	97.4	98.4	99.7	97.8	99.1	99.4	101.9	97.9	95.1	98.4	92.3	95.6	92.6		
	2021	18.2			101.2	101.0	100.7	103.8	102.6	101.2	103.0	102.3	99.2	98.5	100.4	98.1	98.3	98.7	96.6	98.3	98.3	94.1	99.5	93.0	94.5	91.8		
	2020	16.1			103.8	102.8	101.5	107.5	104.5	101.9	97.6	101.5	99.8	95.3	94.5	102.6	95.3	101.2	101.2	104.6	94.9	95.3	98.3	95.7	95.1	92.3		
	2019	17.9			102.9	101.6	101.4	109.3	100.9	102.8	101.5	96.8	98.5	99.0	98.7	96.5	100.3	94.4	101.4	103.8	101.4	96.2	96.8	86.5	99.1	94.1		
ROOT YIELD (Gapped Trials)																												
% Mean of (C)	Mean	102.1			103.2	101.7	100.1	106.5	104.0	101.8	100.4	99.8	102.2	98.0	98.1	101.5	97.9	102.2	97.8	100.1	99.4	94.7	100.4	91.0	98.4	93.2		
	2021	102.6			102.0	100.9	100.6	103.9	103.3	102.5	102.7	101.9	101.6	99.4	100.1	100.2	99.0	103.1	94.5	97.7	100.1	95.3	100.7	91.6	97.2	92.5		
	2020	99.5			104.7	101.8	98.9	107.5	105.1	100.6	97.5	98.7	102.8	95.7	93.9	103.3	95.3	102.4	100.6	102.3	95.6	94.1	101.4	94.4	98.5	92.7		
	2019	105.4			102.8	102.6	101.0	109.0	103.4	102.5	101.9	96.8	102.4	100.3	99.7	100.5	99.9	99.4	98.7	100.3	104.5	94.8	98.6	85.2	101.9	94.7		
SUGAR CONTENT (Gapped Trials)																												
Sugar %	Mean	16.9		0.3	16.8	17.0	17.1	16.9	16.8	16.9	17.0	17.2	16.4	16.8	17.0	16.6	16.9	16.4	17.2	17.3	16.7	17.0	16.6	17.2	16.4	16.8		
	2021	17.7			17.6	17.8	17.8	17.7	17.6	17.5	17.8	17.8	17.3	17.6	17.8	17.4	17.6	17.0	18.1	17.9	17.4	17.5	17.5	18.0	17.2	17.6		
	2020	16.1			16.0	16.3	16.6	16.2	16.0	16.3	16.2	16.6	15.7	16.0	16.2	16.0	16.1	15.9	16.2	16.5	16.0	16.3	15.6	16.4	15.5	16.0		
	2019	16.9			16.9	16.8	16.9	17.0	16.5	17.0	16.9	16.9	16.3	16.7	16.8	16.3	17.0	16.1	17.4	17.5	16.4	17.2	16.6	17.2	16.5	16.9		
NORMAL SOWN BOLTERS		Mean of (C)		95% lsd	99.9% lsd																							
Bolters/ha (per 100,000 plants)	Mean	19	-	166	0.0	67	30	94	5	0	5	33	0	28	45	30	40	5	81	0	26	25.7	0	0	2	35		
	2021	21	-	173	0.0	72	0	132	0	0	0	72	0	0	0	69	0	0	130	0	59	64.1	0	0	0	0		
	2020	26	-	414	0.0	132	0	132	0	0	0	0	0	0	153	0	143	0	0	0	0	0.0	0	0	0	127		
	2019	21	-	258	0.0	0	107	0	0	0	0	0	0	0	213	0	0	0	0	96	0	0	0	0	0	0		
PRE-GAPPING ESTABLISHMENT																												
Plant population as % mean of (C) 2019 seed and 2 sites in 2021 sown at 9cm spacing	Mean	140	6.8		100.2	97.7	99.0	101.8	98.0	101.2	91.6	98.4	103.2	100.7	101.7	104.4	100.3	102.0	99.3	99.1	102.7	101.8	103.8	97.3	95.5	103.1		
	2021	125			127.2	124.2	125.0	127.9	121.4	127.4	113.9	129.9	127.5	123.4	122.2	126.7	128.0	124.5	123.7	129.4	132.3	124.2	129.8	121.3	124.3	125.0		
	2020	98			101.7	97.1	99.9	102.6	105.9	100.3	95.9	100.0	105.6	101.5	102.4	106.6	100.0	103.8	99.0	100.1	99.0	102.8	103.8	101.4	98.4	101.6		
	2019	210			98.6	96.9	98.4	102.0	93.9	100.9	86.6	92.8	103.2	102.3	103.8	106.5	99.2	103.8	99.2	96.1	103.3	102.8	104.3	94.7	88.9	105.4		
RL SYSTEM																												
Year first listed					2017	2018	2018	2020	2022	2021	2022	2022	2021	2022	2022	2022	2020	2022	2021	2021	2022	2020	2018	2021	2022	2021		
BREEDER/UK CONTACT ⁵																												
Breeder					KWS	BTS	KWS	BTS	KWS	KWS	KWS	BTS	SV	STR	STR	SV	KWS	SV	BTS	BTS	STR	SV	KWS	KWS	BTS	KWS		
UK Agent					KWS	LG	KWS	LG	KWS	KWS	KWS	LG	SV	STR	STR	SV	KWS	SV	LG	LG	STR	SV	KWS	KWS	LG	KWS		

Data in bold from commercial seed. *Note 2020 trials grown in a stand