

RECOMMENDED LIST OF SUGAR BEET VARIETIES 2021 (Based on trials from 2017-2019)

Rz1 rhizomania varieties			Daphna	Sabatina KWS	Cantona KWS	BTS 3325	Degas	BTS1915	Evalotta KWS	Kortessa KWS	BTS1140	Advena KWS	Lightning	Catriona KWS	Eldorana KWS	Sancha KWS	Lacewing	BTS4100	Conger	Vixen	Puffin	Philina KWS	Smart Rivetta KWS	Smart Janninka KWS			
Status: (C) = control variety ¹			R(C)	R(C)	R(C)	R(C)	R	PR1	PR1	PR3	PR3	PR2	PR2	PR1	PR1	PR1	PR1	PR1	PR2	PR2	PR2	PS3	PS1	PS1			
AYPR/BCN as claimed by the Breeder			BCN	-	BCN	-	-	-	-	-	-	-	-	-	-	-	BCN	-	-	-	-	AYPR	ALS	ALS			
CROP YIELDS		MEAN	95% lsd																								
Adjusted tonnes % of C=100% ²		112.9 t/ha	100.0	2.7	102.8	100.2	98.9	98.3	96.7	108.2	103.0	102.2	101.8	101.1	101.0	100.8	100.5	100.4	100.2	99.6	98.9	98.9	96.7	101.5	92.7	88.9	
Sugar yield % of C=100% ²		18.1 t/ha			102.8	100.2	98.9	98.3	96.7	108.2	103.0	102.2	101.8	101.1	100.9	100.8	100.5	100.3	100.2	99.6	98.9	98.9	96.7	101.5	92.7	88.9	
Root yield % of C=100% ²		101.4 t/ha			104.3	101.7	98.0	97.3	96.8	108.8	102.9	103.5	102.4	100.3	103.8	101.5	99.5	99.8	99.1	97.1	100.3	101.0	97.4	102.4	93.6	89.6	
Sugar content %		17.8%			17.6	17.6	18.0	18.0	17.8	17.7	17.8	17.6	17.7	18.0	17.3	17.7	18.0	17.9	18.0	18.3	17.5	17.5	17.7	17.7	17.6	17.7	
BOLTERS per 100,000 plants/ha		MEAN	95% lsd		99.9% lsd																						
"X" Unsuitable for sowing BEFORE Mid March for new (2021) list					-	X	-	-	X	X	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-	-	
Early sowing, before 5 March ³	2,199ha	3,315	4,288	2,690	3,457	3,256	1,780	4,058	8,484	3,498	1,972	4,495	2,681	3,295	1,265	2,083	1,667	4,916	1,570	2,034	1,871	1,716	6,278	1,564	2,733		
Normal sowing	16/ha	59	89	9	16	7	9	50	0	0	7	35	9	0	0	0	0	9	0	0	9	0	26	67	0		
PRE-GAPPING ESTABLISHMENT ⁴																											
Control	100%			98.9	101.0	100.7	99.2	101.5	103.7	102.5	100.2	100.0	99.6	102.4	98.1	100.1	100.6	102.3	98.6	99.7	101.3	101.2	102.3	95.2	98.6		
DISEASE (1 = high leaf infection 9 = very low leaf infection) ⁵																											
Rust	4.3			4.3	4.9	4.3	3.8	6.0	(8.7)	(2.2)	7.7	5.0	(3.6)	(5.9)	(1.4)	(1.7)	(4.1)	(3.6)	(4.3)	(5.1)	(5.5)	(4.4)	3.0	(3.4)	(3.7)		
Powdery mildew	5.5			5.6	5.0	5.8	5.5	2.5	(4.2)	(4.2)	5.7	4.6	(3.6)	(4.8)	(5.6)	(5.1)	(3.9)	(4.0)	(2.9)	(5.1)	(3.7)	(4.2)	4.6	(5.4)	(3.0)		
RL SYSTEM																											
Year first listed				2017	2015	2016	2017	2017	2020	2020	2018	2018	2019	2019	2020	2020	2020	2020	2020	2019	2019	2019	2019	2018	2020	2019	
BREEDER/UK CONTACT ⁶																											
Breeder				KWS	KWS	KWS	BTS	STR	BTS	KWS	KWS	BTS	KWS	SV	KWS	KWS	KWS	SV	BTS	SV	SV	SV	KWS	KWS	KWS		
UK Agent				KWS	KWS	KWS	LG	STR	LG	KWS	KWS	LG	KWS	SV	KWS	KWS	KWS	SV	LG	SV	SV	SV	KWS	KWS	KWS		

Mean of control values include BTS 860 which is no longer listed.

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 103,100 plants/ha in these trials. Differences in adjusted tonnes of less than 2.7% 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 3.7% should be treated with reserve.

⁵ Observations taken from inoculated trials that are not taken to yield.

⁶ BTS = Betaseed, KWS = KWS UK Ltd, LG = Limagrain UK Ltd, STR = Strube Sugar Beet UK Ltd, SV = SESVanderHave UK Ltd, MH = MariboHillesjö

Brackets indicate figure derived from fewer than 3 years of data

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Rz1 rhizomania varieties 3-year data				Daphna	Sabatina KWS	Cantona KWS	BTS 3325	Degas	BTS1915	Evalotta KWS	Kortessa KWS	BTS1140	Advena KWS	Lightning	Catriona KWS	Eldorana KWS	Sancha KWS	Lacewing	BTS4100	Conger	Vixen	Puffin	Philina KWS	Smart Rivetta KWS	Smart Janninka KWS	
STATUS (C) = control variety				R(C)	R(C)	R(C)	R(C)	R	PR1	PR1	PR3	PR3	PR2	PR2	PR1	PR1	PR1	PR1	PR1	PR2	PR2	PR2	PS3	PS1	PS1	
AYPR/BCN as claimed by the Breeder				BCN	-	BCN	-	-	-	-	-	-	-	-	-	-	-	BCN	-	-	-	-	AYPR	ALS	ALS	
ADJUSTED TONNES (Gapped Trials)				T's per ha	Control	95% lsd																				
% Mean of (C)	Mean	112.9	100.0	2.7	102.8	100.2	98.9	98.3	96.7	108.2	103.0	102.2	101.8	101.1	101.0	100.8	100.5	100.4	100.2	99.6	98.9	98.9	96.7	101.5	92.7	88.9
	2019	114.5			102.1	100.9	98.7	97.4	96.6	108.3	101.7	100.1	102.8	100.1	100.6	98.4	98.7	100.7	100.3	100.9	99.1	97.9	94.2	101.8	91.0	90.1
	2018	101.9			101.9	98.5	99.1	99.5	97.6	108.0	103.4	101.6	99.2	103.1	102.1	102.7	100.8	99.8	100.8	99.5	98.4	99.9	96.7	99.0	92.1	90.0
	2017	123.2			104.1	101.2	99.0	97.9	95.9	108.4	103.6	104.4	103.6	100.0	100.2	101.0	101.6	100.6	99.5	98.8	99.2	98.7	98.7	103.7	94.1	87.0
	Mean	18.1			102.8	100.2	98.9	98.3	96.7	108.2	103.0	102.2	101.8	101.1	100.9	100.8	100.5	100.3	100.2	99.6	98.9	98.9	96.7	101.5	92.7	88.9
% Mean of (C)	2019	18.3			102.1	100.9	98.7	97.4	96.6	108.3	101.7	100.1	102.8	100.1	100.5	98.4	98.7	100.7	100.3	100.9	99.1	97.9	94.2	101.8	91.0	90.2
	2018	16.3			101.9	98.5	99.1	99.5	97.6	108.0	103.4	101.6	99.2	103.1	102.1	102.7	100.9	99.8	100.8	99.5	98.4	99.9	96.7	99.1	92.7	90.0
	2017	19.7			104.2	101.2	98.9	97.9	95.9	108.4	103.6	104.4	103.6	100.0	100.2	100.9	101.6	100.6	99.5	98.8	99.2	98.7	98.7	103.6	94.1	86.9
	Mean	101.4			104.3	101.7	98.0	97.3	96.8	108.8	102.9	103.5	102.4	100.3	103.8	101.5	99.5	99.8	99.1	97.1	100.3	101.0	97.4	102.4	93.6	89.6
% Mean of (C)	2019	108.2			103.6	102.2	98.1	96.5	97.7	109.1	101.4	102.0	103.0	100.7	102.5	99.8	99.6	100.5	98.8	97.6	101.9	102.9	95.4	103.2	91.7	90.8
	2018	90.8			103.3	100.2	97.7	98.9	97.9	109.0	103.9	103.1	100.1	102.0	104.8	103.0	98.9	98.3	99.6	97.5	99.3	101.0	98.5	99.8	94.5	91.0
	2017	106.9			105.7	102.6	98.3	96.5	94.9	108.5	103.4	105.2	104.0	98.3	103.9	101.6	100.0	100.8	98.9	96.3	99.9	99.5	98.3	104.2	94.3	87.2
	Mean	17.8			17.6	17.6	18.0	18.0	17.8	17.7	17.8	17.6	17.7	18.0	17.3	17.7	18.0	17.9	18.0	18.3	17.5	17.5	17.7	17.7	17.6	17.7
Sugar %	2019	16.9			16.7	16.7	17.0	17.1	16.7	16.8	17.0	16.6	16.9	16.8	16.6	16.7	16.8	16.9	17.2	17.5	16.4	16.1	16.7	16.7	16.8	16.8
	2018	18.0			17.8	17.8	18.3	18.2	17.9	17.8	18.0	17.8	17.9	18.2	17.6	18.1	18.4	18.3	18.2	18.4	17.8	17.8	17.7	17.9	17.7	17.8
	2017	18.5			18.2	18.2	18.6	18.7	18.6	18.5	18.5	18.3	18.4	18.8	17.8	18.4	18.7	18.5	18.6	19.0	18.3	18.3	18.6	18.4	18.4	18.4
	Mean	17.8			17.6	17.6	18.0	18.0	17.8	17.7	17.8	17.6	17.7	18.0	17.3	17.7	18.0	17.9	18.0	18.3	17.5	17.5	17.7	17.7	17.6	17.7
EARLY SOWN BOLTERS				Mean of (C) (excluding X)	95% lsd	99.9% lsd																				
"X" Unsuitable for sowing BEFORE Mid March				-	X	-	-	X	X	X	-	X	-	-	-	-	-	-	X	-	-	-	-	X	-	-
Bolters/ha (per 100,000 plants) Sown on or before 5th March	Mean	2,199	3,315	4,288	2,690	3,457	3,256	1,780	4,058	8,484	3,498	1,972	4,495	2,681	3,295	1,265	2,083	1,667	4,916	1,570	2,034	1,871	1,716	6,278	1,564	2,733
	2019	4,200	6,551	8,728	6,096	10,298	7,035	2,819	13,859	12,152	7,590	5,653	10,695	7,091	6,870	2,581	2,811	3,831	3,732	2,837	6,727	6,962	4,675	8,863	3,943	6,691
	2018	858	1,864	2,843	832	1,193	1,582	884	1,350	8,661	2,020	718	1,410	1,350	1,065	641	1,138	462	6,447	914	901	472	919	3,315	652	1,570
	2017	2,516	4,370	6,161	3,009	2,698	2,793	2,083	2,802	6,047	2,673	1,339	5,124	1,748	3,955	1,004	2,733	1,754	4,998	1,344	923	1,061	892	8,247	1,118	1,716
	Mean	16	59	89	9	16	7	9	50	0	0	7	35	9	0	0	0	0	9	0	0	9	0	26	67	0
Bolters/ha (per 100,000 plants)	2019	12	76	123	0	0	0	0	26	0	0	23	50	26	0	0	0	0	0	0	0	28	0	54	79	0
	2018	9	69	112	0	0	0	26	26	0	0	0	50	0	0	0	0	0	26	0	0	0	0	0	86	0
	2017	35	99	145	28	57	26	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	28	30	0	
	Mean	198			98.9	101.0	100.7	99.2	101.5	103.7	102.5	100.2	100.0	99.6	102.4	98.1	100.1	100.6	102.3	98.6	99.7	101.3	101.2	102.3	95.2	98.6
Plant population as % mean of (C) Seed sown at 9cm spacing	2019	192			98.2	101.7	100.5	100.4	102.0	105.7	103.1	100.4	97.4	101.5	101.2	97.6	102.3	98.7	102.7	97.5	102.1	101.1	100.6	104.3	97.0	101.6
	2018	214			98.6	100.5	100.3	100.1	101.4	103.7	102.9	102.3	101.0	99.2	104.2	96.4	100.4	102.3	102.1	98.6	98.9	103.2	100.8	103.5	95.4	97.0
	2017	185			100.1	100.8	101.4	96.8	101.2	101.7	101.3	97.5	101.5	98.0	101.6	100.5	97.4	100.5	102.0	99.8	97.9	99.3	102.4	98.5	92.9	97.3
	Mean	17			17	15	17	20	11	4	32	6	14	22	11	41	37	19	22	18	14	12	17	25	23	21
% leaf infection Natural & inoculated trials (means re-transformed)	2019	19			17	20	20	18	6	4	26	5	9	20	10	33	32	16	19	16	12	15	14	24	23	18
	2018	27			23	24	20	43	24	-	-	13	27	22	12	-	-	-	-	23	17	10	36	21	-	24
	2017	14			16	8	14	14	14	-	-	5	19	-	-	-	-	-	-	-	-	-	-	35	-	-
	Mean	1			1	2	0	1	28	5	5	1	3	10	3	1	2	7	6	19	2	9	5	3	1	18
% leaf infection Natural & inoculated trials (means re-transformed)	2019	1			2	3	1	2	32	18	8	1	5	18	7	1	7	11	11	22	3	10	5	8	2	18
	2018	2			0	3	0	0	28	0	3	0	2	4	1	1	0	3	2	18	0	18	10	0	0	17
	2017	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mean	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Data in bold from commercial seed.