RECOMMENDED LIST OF SUGAR BEET VARIETIES 2025 (Based on trials from 2021-2023) Supplementary data

Rz1 rhizomania varieties					BTS1915	Daphna	Harryetta KWS	Katjana KWS	Chyma KWS	Annatina KWS	Josephina KWS	Morgan	ST Tweed	Magpie	ST Trent	Wren	Button	Osprey	BTS3610	Stewart	Tawny	Adder	Smart Uma KWS	BTS Smart 9485	Smart Vesnica KWS	Maruscha KWS
Status: (C) = control variety [1]					Y5(C)	Y8 (C)	Y3	Y4(C)	Y1	Y3	Y1	Y3	Y1	Y1	Y1	Y4(C)	Y3	Y2	Y3	Y3	Y3	Y3	SY1	SY3	SY2	SY4
AYPR/BCN/ALS/VY/Cercospora as claimed by the Breeder					-	BCN	BCN	BCN	CERC	-	-	-	-	-	-	-	BCN	AYPR	-	-	-	-	ALS	ALS	ALS	V
ADJUSTED TONNES		T's per ha	Control	95% lsd																						
% Mean of (C)	Mean	102.7	100.0	3.3	102.2	101.3	101.3	100.6	101.0	99.3	99.5	98.6	98.2	97.7	97.7	97.6	97.6	97.6	97.3	97.2	96.7	96.7	95.3	93.1	93.0	88.2
	2023	98.7			102.5	101.7	99.7	100.2	103.0	98.7	99.4	100.8	100.7	97.1	98.6	96.8	96.2	95.4	97.6	98.9	97.5	96.8	95.5	92.2	93.4	88.3
	2022	94.1			100.9	101.7	103.5	101.5	97.6	100.5	97.9	96.6	93.5	97.9	96.0	97.5	97.1	97.2	98.7	93.3	93.5	93.8	95.9	93.0	89.3	87.9
	2021	114.8			103.0	100.6	100.9	100.1	101.5	98.7	101.0	98.3	98.9	98.1	98.0	98.3	99.0	101.0	96.0	98.9	98.5	99.0	94.5	94.0	96.7	88.3
SUGAR YIELD																										
% Mean of (C)	Mean	16.4		3.3	102.2	101.3	101.3	100.6	101.0	99.3	99.5	98.6	98.2	97.7	97.7	97.6	97.6	97.6	97.3	97.2	96.7	96.7	95.3	93.1	93.0	88.2
	2023	15.8			102.5	101.7	99.7	100.2	103.0	98.7	99.4	100.8	100.7	97.1	98.6	96.8	96.2	95.4	97.6	98.9	97.5	96.8	95.5	92.2	93.4	88.3
	2022	15.1			100.9	101.7	103.5	101.5	97.6	100.5	97.9	96.6	93.5	97.9	96.0	97.5	97.1	97.2	98.7	93.3	93.5	93.8	95.9	93.0	89.3	87.9
	2021	18.4			103.0	100.6	100.9	100.1	101.5	98.7	101.0	98.3	98.9	98.1	98.0	98.3	99.0	101.0	96.0	98.9	98.5	99.0	94.5	94.0	96.7	88.3
ROOT YIELD																										
% Mean of (C)	Mean	96.7		3.5	102.2	101.1	101.7	99.4	101.1	97.8	96.9	97.4	97.5	96.4	95.7	99.2	97.5	96.8	96.5	95.7	97.6	98.5	94.3	94.5	91.2	86.9
	2023	98.5			102.7	102.1	101.0	99.2	102.2	97.8	96.4	98.6	99.4	96.3	95.8	97.5	95.1	91.9	97.5	97.0	98.6	98.4	93.7	93.8	92.0	87.5
	2022	88.6			101.0	101.0	103.1	99.7	98.1	98.4	96.2	95.5	93.0	96.2	94.4	99.9	97.0	98.6	96.1	92.2	94.3	95.7	95.0	93.9	86.9	86.0
	2021	102.7			102.7	100.2	101.2	99.3	102.2	97.2	98.4	97.9	98.8	96.5	96.8	100.3	100.2	100.9	95.8	97.5	99.5	100.9	94.6	95.5	94.9	87.0
SUGAR CONTENT																										
Sugar %	Mean	16.9		0.3	16.9	16.9	16.8	17.1	16.9	17.2	17.3	17.1	17.0	17.1	17.2	16.6	16.9	17.0	17.1	17.1	16.7	16.6	17.1	16.7	17.2	17.1
	2023	16.0			15.9	15.9	15.8	16.1	16.1	16.1	16.5	16.3	16.2	16.1	16.5	15.9	16.1	16.6	16.0	16.3	15.8	15.7	16.2	15.7	16.2	16.1
	2022	16.9			16.8	17.0	17.0	17.2	16.9	17.2	17.2	17.0	16.9	17.1	17.1	16.5	16.9	16.6	17.4	17.0	16.7	16.6	17.1	16.8	17.2	17.1
	2021	17.8			17.8	17.9	17.8	18.0	17.7	18.1	18.3	17.9	17.9	18.1	18.1	17.5	17.6	17.8	17.9	18.1	17.6	17.5	17.9	17.5	18.1	18.0
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
Bolters/ha (per 100,000 plants) Sown on or before 5th March	Mean	4,012 /ha	6,834	9,611	9,990	3,345	2,273	2,443	10,298	3,853	1,576	8,376	1,944	[4,636]	2,981	6,129	3,266	[3,656]	5,516	4,117	7,356	7,511	3,325	3,055	4,000	10,324
	2023	8,863	15,596	22,630	17,113	5,683	3,775	4,689	12,305	7,128	2,062	13,125	3,256	8,977	6,780	17,197	5,546	6,031	13,223	6,096	17,923	18,055	5,839	5,668	6,464	20,528
	2022	361	1,328	2,351	2,236	291	247	153	6,534	291	247	396	500	489	247	153	824	698	355	413	413	291	291	762	633	1,296
	2021	3,387	8,078	12,825	11,303	4,188	2,639	2,606	10,722	4,610	2,126	15,069	1,858	-	2,639	5,934	3,256	-	5,546	5,998	7,974	8,772	3,989	2,733	4,875	12,213
NORMAL SOWN BOLTERS		Mean of (C)	95% lsd	99.9% lsd																						
Bolters/ha (per 100,000 plants)	Mean	33	-	129	30	7	0	9	14	7	30	47	47	35	12	54	7	23	0	40	45	9	14	19	12	69
	2023	30	-	184	59	0	0	16	0	0	0	67	23	47	64	0	19	0	0	122	0	0	42	0	0	0
	2022	38	-	254	0	0	0	26	52	23	0	0	107	21	0	112	0	47	0	40	26	0	52	0	0	33
	2021	23	-	185	16	19	0	0	0	0	119	67	0	0	50	40	19	0	0	0	86	21	0	47	47	151
EARLY ESTABLISHMENT		Mean of (C)		95% lsd																						
Plant population as % mean of (C)	Mean	135		3.6	99.8	99.5	98.6	100.0	98.7	95.2	97.8	99.0	94.7	98.5	98.8	100.5	99.8	99.8	98.2	98.5	99.5	100.2	96.9	95.2	99.9	96.5
4 sites in 2023 sown at 9cm spacing[1]	2023	132			101.2	100.0	100.3	98.7	100.4	94.6	98.3	99.9	94.9	100.8	98.7	98.4	98.2	95.9	98.9	100.8	97.9	98.4	99.8	94.4	99.1	97.9
7 sites in 2022 sown at 9cm spacing[2]	2022	151			99.7	99.0	99.2	100.1	98.4	97.1	97.4	98.3	94.5	97.2	97.1	102.2	98.7	100.9	96.3	96.3	98.8	100.7	95.9	94.5	98.9	95.6
3 sites in 2021 sown at 9cm spacing[3]	2021	122			98.3	99.7	95.9	101.5	96.4	93.4	97.6	99.0	94.8	96.8	101.3	100.7	103.2	104.1	99.8	98.6	102.3	101.5	93.6	96.9	102.8	96.0
TOTAL MEASURED IMPURITIES		Mean of (C)	15% above mean of C																							
Total Impurities	Mean	3.42	3.93	0.211	3.68	3.50	3.30	3.15	3.51	3.35	3.22	3.11	3.15	3.23	3.16	3.53	3.26	3.23	3.31	3.08	3.55	3.58	3.84	3.24	3.65	3.72
	2023	3.49			3.74	3.52	3.40	3.28	3.61	3.53	3.07	3.18	3.35	3.29	3.24	3.65	3.29	3.16	3.49	3.14	3.70	3.69	3.85	3.24	3.70	3.87
	2022	3.78			4.07	3.85	3.75	3.46	3.88	3.67	3.82	3.48	3.44	3.61	3.57	3.93	3.65	3.70	3.50	3.45	3.94	3.99	4.22	3.53	4.15	4.02
	2021	2.99			3.22	3.14	2.76	2.71	3.02	2.87	2.95	2.66	2.57	2.82	2.67	3.04	2.86	2.85	2.95	2.66	3.02	3.08	3.52	2.94	3.06	3.28
RUST		Mean of (C)																								
% leaf infection Natural infected trials	Mean	7			4	8	10	10	5	6	5	10	7	9	6	7	8	8	6	10	5	6	5	5	4	5
	2023	2			1	3	5	4	1	1	1	6	3	6	2	2	3	4	2	4	2	3	0	3	1	1
	2022	13			8	16	18	17	-	10	-	15	-	13	-	12	14	14	11	16	9	10	-	8	9	8
	2021	4			3	4	4	6	-	5	-	7	-	-	-	5	6	-	3	9	5	4	-	4	-	4
POWDERY MILDEW		Mean of (C)																								
% leaf infection Natural infected trials (mean data re-transformed)	Mean	3			3	2	2	2	1	3	30	9	1	6	31	4	3	5	2	8	3	3	1	1	4	10
	2023	6			12	3	3	4	3	10	59	18	4	21	57	8	5	9	8	24	10	9	4	1	14	22
	2022	2			0	2	3	2	-	1	-	8	-	2	-	3	2	5	1	7	2	1	-	1	1	4
	2021	3			3	1	0	3	-	9	-	3	-	-	-	1	8	-	1	1	0	4	-	0	-	29
CERCOSPORA																										
% leaf infection Natural infected trials (mean data re-transformed)	Mean	1.7			1.5	1.4	1.8	1.8	1.0	2.4	1.5	2.8	1.7	1.3	2.5	1.8	2.7	1.5	1.7	3.2	1.3	1.7	1.6	2.4	1.8	0.5
	2023	0.6			0.3	0.3	0.7	0.7	0.2	1.1	0.4	0.6	0.3	0.3	0.7	0.6	1.0	0.4	0.4	0.9	0.3	0.4	0.5	1.2	0.6	0.1
	2022	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2021	4.0			3.9	3.5	4.1	4.4	1.7	5.5	4.2	8.4	5.7	3.2	8.2	4.1	6.9	3.7	4.5	9.1	3.1	4.7	3.5	5.6	4.2	1.2

1. 12 trials were drilled and had data collected in 2023; 9 of these trials were harvested.
2. 11 trials were drilled and had data collected in 2022; 9 of these trials were harvested.
3. 10 trials were drilled and had data collected in 2021; 10 of these trials were harvested.