

2023 BSDF Rhizomania Nursery Results - Imperial Valley OVT

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USDA/ARS - Kimberly Idaho

Entry ^z	Variety	Foliar rating (% susceptible) ^y	Root rating ^x	Sucrose content (%)	Nitrate (ppm)	Conductivity (mmhos)	Root yield (tons/A)	ERS (lb/A) ^w
7	BTS 5678	0 e	1.8 g	15.45 b	233	0.81	48.76 a	12,643 a
8	BTS 511N	1 de	2.0 f	16.51 a	159	0.72	44.16 b	12,441 a
6	BTS 5460	0 e	2.2 ef	15.91 ab	162	0.72	41.13 c	11,152 b
9	BTS 5255	1 de	2.2 ef	16.17 ab	115	0.76	40.39 c	11,059 b
2	SV 1927	2 cd	2.3 de	15.36 b	129	0.74	38.74 cd	10,098 c
1	SV 1915	4 bc	2.5 c	15.37 b	109	0.69	35.50 e	9,333 cd
5	SV 911	4 b	2.3 de	14.19 cd	118	0.78	36.72 de	8,742 de
3	SV 602	4 bc	2.4 cd	13.56 cd	184	0.79	35.28 e	7,989 e
4	SV 983	0 e	3.2 b	14.30 c	144	0.68	21.31 f	5,172 f
Check	Susceptible Check	100 a	4.0 a	13.39 d	104	0.9	15.85 g	3,478 g
Mean		12	2.5	15.02	146	0.76	35.78	9,211
$P > F^v$		<0.0001	<0.0001	<0.0001	0.0848	0.0644	<0.0001	<0.0001
LSD		2	0.2	0.85	NS	NS	2.95	824

^z BTS 4D20 was included as the BNYVV susceptible check cultivar.

^y Foliar rating = percentage of foliage with rhizomania symptoms (narrow yellow upright leaves).

^x Root rating using a scale of 0-9 (0 = healthy and 9 = dead; Plant Disease 93:632-638); ≥ 3 would be considered susceptible).

^w Estimated recoverable sucrose (ERS) = extraction x 0.01 x gross sucrose where extraction
 $= 250 + [1255.2 \times (\text{conductivity} - 15000) \times (\text{percent sucrose} - 6185)] / (\text{percent sucrose} \times [98.66 - (7.845 \times \text{conductivity})])$.

^v $P > F$ was the probability associated with the F value. Within each variable, means followed by the same letter did not differ significantly based on Fisher's protected least significant difference (LSD; $\alpha = 0.05$). NS = not significant.