

Table S7 Prediction model and verification of roots number in different varieties.

Variety	N	Roots number prediction model	R ²	F	P	D-W	MAE	AER
‘Apricot Fudge’	110	$y = 6.168 - 1.808x_1 + 0.004x_2 - 0.138x_3 + 0.197x_4 + 0.159x_5$	0.130	1.369	0.253	1.932	0.992	14.52
‘Easy Dream’	134	$y = 8.999 - 4.570x_1 - 0.064x_2 - 0.127x_3 + 0.024x_4 + 1.668x_5$	0.281	3.436	0.010	2.577	1.113	28.60
‘Easy Sun’	100	$y = 3.461 - 2.623x_1 - 0.082x_2 + 0.093x_3 + 0.055x_4 + 0.551x_5$	0.136	1.388	0.247	2.201	0.832	5.67
‘Easy Whisper’	78	$y = -0.221 + 0.218x_1 + 0.101x_2 + 0.017x_3 + 0.089x_4 - 0.782x_5$	0.038	0.341	0.885	1.880	0.597	16.18
‘Pearl Frances’	123	$y = 3.361 - 1.703x_1 - 0.008x_2 - 0.012x_3 + 0.265x_4 - 0.393x_5$	0.082	0.801	0.555	2.153	0.783	22.28
‘Pearl Melanie’	106	$y = 17.428 - 15.639x_1 + 0.006x_2 - 0.138x_3 + 0.146x_4 + 1.028x_5$	0.170	1.891	0.114	2.603	1.196	33.59
‘Pearl White’	138	$y = 1.597 - 1.198x_1 + 0.041x_2 - 0.011x_3 + 0.429x_4 - 0.536x_5$	0.096	0.976	0.443	2.043	0.587	11.08
‘Pink Flight’	138	$y = -4.329 + 4.520x_1 - 0.027x_2 + 0.165x_3 - 0.014x_4 - 0.033x_5$	0.143	1.538	0.197	1.937	0.530	16.41
‘Purple Marble’	93	$y = 7.942 - 4.913x_1 - 0.038x_2 - 0.058x_3 - 0.004x_4 + 1.116x_5$	0.111	1.148	0.349	2.010	1.194	22.19
‘Red Twin’	62	$y = 12.485 - 7.087x_1 - 0.009x_2 - 0.128x_3 - 0.404x_4 + 1.035x_5$	0.104	0.790	0.564	2.501	1.150	6.11
‘Red Velvet’	92	$y = 15.079 - 14.872x_1 + 0.089x_2 - 0.089x_3 + 0.050x_4 + 0.777x_5$	0.248	2.840	0.027	2.404	0.947	5.03
‘Strawberry Event’	72	$y = 3.051 + 0.473x_1 - 0.030x_2 - 0.024x_3 + 0.140x_4 - 0.350x_5$	0.025	0.234	0.946	1.569	1.003	19.67
‘Tresor’	90	$y = -6.836 + 4.346x_1 + 0.202x_2 + 0.270x_3 + 0.345x_4 - 3.389x_5$	0.115	1.148	0.350	2.426	0.907	7.62
‘Tribal Dance’	106	$y = 4.578 + 1.399x_1 - 0.138x_2 - 0.052x_3 - 0.500x_4 + 1.602x_5$	0.093	0.946	0.461	1.414	0.516	30.27
‘Yellow Cocotte’	61	$y = -2.416 + 4.219x_1 - 0.164x_2 + 0.218x_3 - 0.137x_4 + 0.666x_5$	0.184	2.075	0.086	1.938	0.612	10.67
‘Hotel California’	163	$y = 8.208 - 1.934x_1 - 0.065x_2 - 0.098x_3 + 0.173x_4 - 0.116x_5$	0.246	2.994	0.020	2.240	1.270	18.92
‘November Rain’	88	$y = 11.199 - 8.161x_1 - 0.123x_2 - 0.066x_3 + 0.003x_4 + 2.371x_5$	0.157	1.718	0.149	1.994	1.091	11.85
‘Eyeliner’	84	$y = 2.458 - 2.581x_1 - 0.038x_2 + 0.089x_3 + 0.34x_4 + 0.019x_5$	0.100	0.980	0.441	1.823	0.628	3.15
‘Royal Sunset’	90	$y = 3.312 - 0.244x_1 - 0.003x_2 - 0.047x_3 - 0.113x_4 + 1.298x_5$	0.123	1.203	0.324	2.319	0.984	7.10
‘Yellow Diamond’	73	$y = -6.457 + 2.533x_1 + 0.237x_2 + 0.015x_3 + 0.948x_4 - 0.872x_5$	0.209	2.329	0.058	1.755	1.509	16.98