

GENETIC MAPPING OF TUBER SIZE DISTRIBUTION AND MARKETABLE TUBER YIELD UNDER DROUGHT STRESS IN POTATOES

Journal: Euphytica

Ernest B Aliche^{1,2}, Marian Oortwijn¹, Tom P. J. M. Theeuwes¹, Christian W. B. Bachem¹, Herman J. van Eck¹, Richard G. F. Visser¹, C. Gerard van der Linden¹

¹Plant Breeding, Wageningen University & Research, Droevendaalsesteeg 1, 6708 PB, Wageningen.

²Graduate School Experimental Plant Sciences, Droevendaalsesteeg 1, 6708 PB, Wageningen.

Corresponding author: **C. Gerard van der Linden** +31(0)317 480 850, gerard.vanderlinden@wur.nl

Supplementary Table 1: Parameters of tuber size distribution for six cultivars in the Connantre 2014 and 2015 trials

CULTIVARS	TRT*	YEAR	MAT	TBN ms**	TBN spread	TBN mf***	TBN	TBW MX ^a (kg)	TBW mcs ^b	TBW spread	TBW mf ^c	TBW (kg)
AVANO	WR	2014	Late	63.66	31.48	0.67	88	8.18	115.86	35.63	0.91	16.30
AVANO	DR	2014	Late	54.88	25.78	0.61	80	4.59	71.63	18.71	0.84	11.05
AVANO	WR	2015	Late	60.63	23.88	0.71	96	5.47	73.70	20.84	0.87	13.90
AVANO	DR	2015	Late	45.16	20.05	0.42	93	3.37	58.45	18.49	0.67	7.65
VALIANT	WR	2014	Late	48.12	21.62	0.44	117	3.77	58.56	24.79	0.66	10.35
VALIANT	DR	2014	Late	46.30	18.20	0.43	100	4.30	53.34	15.98	0.59	8.95
VALIANT	WR	2015	Late	44.24	19.06	0.35	128	4.11	53.78	20.56	0.58	10.35
VALIANT	DR	2015	Late	41.91	17.57	0.30	105	3.05	49.86	19.61	0.50	7.35
TERRAGOLD	WR	2014	Int.	65.63	26.70	0.75	107	6.59	86.08	25.60	0.90	17.75
TERRAGOLD	DR	2014	Int.	63.46	28.38	0.70	64	3.73	88.21	29.03	0.89	10.55
TERRAGOLD	WR	2015	Int.	65.56	27.57	0.71	67	5.19	104.09	34.17	0.91	12.60
TERRAGOLD	DR	2015	Int.	52.18	22.64	0.55	44	1.99	64.37	19.16	0.77	4.75
HANSA	WR	2014	Int.	40.51	17.74	0.28	157	5.85	50.84	20.50	0.53	14.75
HANSA	DR	2014	Int.	36.47	15.42	0.19	159	5.83	44.33	17.25	0.37	12.35
HANSA	WR	2015	Int.	44.82	21.50	0.38	141	4.99	60.81	26.43	0.67	15.70
HANSA	DR	2015	Int.	28.56	10.45	0.03	146	3.90	32.31	15.53	0.11	7.10
KURODA	WR	2014	Early	72.74	24.21	0.86	84	7.51	107.68	33.96	0.96	16.50

KURODA	DR	2014	Early	77.31	21.04	0.92	52	5.20	87.47	17.33	0.97	10.50
KURODA	WR	2015	Early	67.94	23.07	0.80	63	4.88	81.91	19.69	0.92	11.45
KURODA	DR	2015	Early	48.33	20.87	0.48	66	2.80	60.76	19.00	0.70	6.40
JAZZY	WR	2014	Early	30.33	12.61	0.09	152	5.01	34.17	18.14	0.20	10.60
JAZZY	DR	2014	Early	28.29	10.72	0.05	144	3.90	29.56	17.36	0.11	7.45
JAZZY	WR	2015	Early	27.57	10.27	0.04	140	4.85	29.35	16.11	0.09	8.80
JAZZY	DR	2015	Early	20.86	3.60	0.00	104	3.27	21.07	8.66	0.00	3.55

*Treatment (WR – Irrigated, DR – Non-irrigated)

**TBN ms: tuber size where overall average tuber number occurred

***TBN mf: marketable fraction of tuber number

^aTBW MX: maximum tuber fresh weight among the tuber size classes

^bTBW mcs: tuber size where maximum tuber fresh weight occurred

^cTBW mf: marketable fraction of tuber fresh weight

MAT: Maturity (Int. – intermediate)