

Appendix to the WISP Breeder's Diversity Toolkit

Summary of the data used for the selection

The following values are given:

- mean: mean values for the SSD line (GRYLD as t/ha, HI as ratio)
- % of pop: percentage of SSD line mean to the population mean
- rank: rank of the SSD line mean in that trial
- % of Paragon: percentage of SSD line mean to Paragon mean

The trials are abbreviated as:

- JI_11: John Innes Centre 2011
- SB_13_HN: NottU Sutton-Bonington 2013, high N
- SB_13_LN: NottU Sutton-Bonington 2013, low N
- RR_13: Rothamsted 2013

The traits are abbreviated as:

- GRYLD: grain yield (t/ha)
- HI: harvest index

	line	Jl_11_GRYLD	SB_13_HN_GRYLD	SB_13_LN_GRYLD	RR_13_GRYLD	RR_13_HI
raw	ParWat34.4	10.9	11.2	10.3	7.36	43.9
% of mean	ParWat34.4	167	139	139	110	97.5
rank	ParWat34.4	100	90	100	80	30
% of Paragon	ParWat34.4	107	110	104	94.6	94.3
raw	ParWat34.28	7.67	10.1	10.7	7.12	46.9
% of mean	ParWat34.28	118	125	145	107	104
rank	ParWat34.28	70	90	100	70	70
% of Paragon	ParWat34.28	74.9	99	108	91.5	101
raw	ParWat34.41	9.62	8.67	10.1	8.06	49.2
% of mean	ParWat34.41	147	108	137	121	109
rank	ParWat34.41	90	70	90	90	90
% of Paragon	ParWat34.41	94	85	102	104	106
raw	ParWat34.45	8.38	8.35	6.74	7.16	43.5
% of mean	ParWat34.45	128	104	91.2	107	96.6
rank	ParWat34.45	80	60	30	70	30
% of Paragon	ParWat34.45	81.9	81.8	68.1	92	93.5
raw	ParWat34.53	5.17	9.05	9.03	7.33	49.5
% of mean	ParWat34.53	79.2	112	122	110	110
rank	ParWat34.53	20	80	80	80	90
% of Paragon	ParWat34.53	50.5	88.7	91.2	94.2	106
raw	ParWat34.54	7.73	9.13	8.82	7.44	45.5
% of mean	ParWat34.54	118	113	119	112	101
rank	ParWat34.54	70	80	80	90	50
% of Paragon	ParWat34.54	75.5	89.5	89.1	95.6	97.8
raw	ParWat34.63	6.4	8.09	7.09	6.61	44.7
% of mean	ParWat34.63	98	100	96	99.1	99.3
rank	ParWat34.63	40	50	40	50	50
% of Paragon	ParWat34.63	62.5	79.3	71.6	85	96
raw	ParWat34.69	4.35	10.3	9.93	6.71	45.9
% of mean	ParWat34.69	66.6	128	134	101	102
rank	ParWat34.69	10	90	90	50	60
% of Paragon	ParWat34.69	42.5	101	100	86.3	98.6
raw	ParWat34.77	10.3	9.04	9.57	7.4	42.9
% of mean	ParWat34.77	158	112	130	111	95.3
rank	ParWat34.77	100	80	90	90	20
% of Paragon	ParWat34.77	101	88.6	96.6	95.1	92.2
raw	ParWat34.87	1.46	10	8.22	7.69	43.5
% of mean	ParWat34.87	22.4	124	111	115	96.6
rank	ParWat34.87	2	90	70	90	20
% of Paragon	ParWat34.87	14.3	98	83	98.9	93.5
raw	ParWat34.88	7.24	9.02	8.7	7.72	41.3
% of mean	ParWat34.88	111	112	118	116	91.8
rank	ParWat34.88	60	80	80	90	10
% of Paragon	ParWat34.88	70.7	88.4	87.9	99.2	88.7
	line	Jl_11_GRYLD	SB_13_HN_GRYLD	SB_13_LN_GRYLD	RR_13_GRYLD	RR_13_HI
raw	ParWat141.43	10.8	10.2	8.65	7.78	48.6
% of mean	ParWat141.43	120	92.1	91	108	105
rank	ParWat141.43	90	30	30	70	60

% of Paragon	ParWat141.43	106	125	117	107	108
raw	ParWat141.44	12.1	10.3	9.54	7.75	50.1
% of mean	ParWat141.44	134	93	100	107	109
rank	ParWat141.44	90	30	50	70	70
% of Paragon	ParWat141.44	118	127	129	107	111
raw	ParWat141.51	11.6	8.91	8	7.22	45.6
% of mean	ParWat141.51	128	80.4	84.2	100	98.9
rank	ParWat141.51	90	7	10	40	30
% of Paragon	ParWat141.51	113	109	108	99.6	101
raw	ParWat141.70	9.79	12.9	11.5	8.15	46.6
% of mean	ParWat141.70	108	116	121	113	101
rank	ParWat141.70	70	90	90	80	40
% of Paragon	ParWat141.70	95.7	158	156	112	104
raw	ParWat141.74	10.4	13.7	9.78	7.4	45.9
% of mean	ParWat141.74	115	124	103	103	99.5
rank	ParWat141.74	80	90	60	50	40
% of Paragon	ParWat141.74	102	168	133	102	102
raw	ParWat141.77	11.4	10.2	10.8	7.39	45.3
% of mean	ParWat141.77	126	92.1	114	102	98.2
rank	ParWat141.77	90	30	80	50	30
% of Paragon	ParWat141.77	111	125	146	102	101

	line	JL_11_GRYLD	SB_13_HN_GRYLD	SB_13_LN_GRYLD	RR_13_GRYLD	RR_13_HI
raw	ParWat209.29	10.5	8.69	7.84	7.19	43.5
% of mean	ParWat209.29	141	109	106	113	98
rank	ParWat209.29	80	60	60	80	40
% of Paragon	ParWat209.29	103	92.9	82.9	91.3	84.8
raw	ParWat209.57	7.37	9.29	9.28	6.95	43.5
% of mean	ParWat209.57	99.1	116	126	109	98
rank	ParWat209.57	40	80	80	70	40
% of Paragon	ParWat209.57	72	99.3	98.2	88.3	84.8
raw	ParWat209.65	11	8.79	7.54	6.34	47.7
% of mean	ParWat209.65	148	110	102	99.3	107
rank	ParWat209.65	80	70	50	40	70
% of Paragon	ParWat209.65	107	94	79.8	80.5	93
raw	ParWat209.66	8.73	13.5	9.41	6.52	47.6
% of mean	ParWat209.66	117	169	128	102	107
rank	ParWat209.66	70	90	80	50	70
% of Paragon	ParWat209.66	85.3	144	99.5	82.8	92.8
raw	ParWat209.70	10.6	9.2	9.41	7.77	43
% of mean	ParWat209.70	143	115	128	122	96.9
rank	ParWat209.70	80	70	80	80	30
% of Paragon	ParWat209.70	104	98.3	99.5	98.7	83.8
raw	ParWat209.87	10.9	8.81	8.35	6.97	49.7
% of mean	ParWat209.87	147	110	113	109	112
rank	ParWat209.87	80	70	80	80	80
% of Paragon	ParWat209.87	107	94.2	88.3	88.6	96.9
raw	ParWat209.88	12	10.8	10.4	7.48	45
% of mean	ParWat209.88	161	135	141	117	101
rank	ParWat209.88	90	80	90	80	50

% of Paragon	ParWat209.88	117	115	110	95	87.7
	line	JL_11_GRYLD	SB_13_HN_GRYLD	SB_13_LN_GRYLD	RR_13_GRYLD	RR_13_HI
raw	ParWat292.17	9.91	11.3	8.27	7.62	42.8
% of mean	ParWat292.17	131	125	99.9	123	97.2
rank	ParWat292.17	90	90	50	100	40
% of Paragon	ParWat292.17	96.8	93.8	69.9	106	85.9
raw	ParWat292.45	9.84	11	8.75	7.44	50.1
% of mean	ParWat292.45	130	122	106	120	114
rank	ParWat292.45	90	90	70	100	100
% of Paragon	ParWat292.45	96.2	91.3	73.9	104	101
raw	ParWat292.66	8.1	11	8.21	6.95	51.1
% of mean	ParWat292.66	107	122	99.2	112	116
rank	ParWat292.66	60	90	50	90	100
% of Paragon	ParWat292.66	79.1	91.3	69.3	97.1	103
raw	ParWat292.68	11.1	9.26	8.04	7.26	46.5
% of mean	ParWat292.68	146	102	97.1	117	106
rank	ParWat292.68	100	60	40	100	80
% of Paragon	ParWat292.68	108	76.8	67.9	101	93.4
raw	ParWat292.69	10.8	10.4	9.68	7.42	46.2
% of mean	ParWat292.69	142	115	117	120	105
rank	ParWat292.69	100	80	90	100	70
% of Paragon	ParWat292.69	106	86.3	81.8	104	92.8
raw	ParWat292.71	9.64	9.86	9.32	7.17	47.3
% of mean	ParWat292.71	127	109	113	116	107
rank	ParWat292.71	90	70	90	90	80
% of Paragon	ParWat292.71	94.2	81.8	78.7	100	95
	line	JL_11_GRYLD	SB_13_HN_GRYLD	SB_13_LN_GRYLD	RR_13_GRYLD	RR_13_HI
raw	ParWat352.30	10.7	9.35	8.65	6.92	40.1
% of mean	ParWat352.30	124	98.2	97.9	108	99
rank	ParWat352.30	90	50	40	80	40
% of Paragon	ParWat352.30	105	74	76.9	87.4	95.7
raw	ParWat352.47	10.8	10.2	8.2	7.18	44.5
% of mean	ParWat352.47	125	107	92.8	112	110
rank	ParWat352.47	90	60	30	90	90
% of Paragon	ParWat352.47	106	80.7	72.9	90.7	106
raw	ParWat352.59	10.7	9.18	10.3	6.94	41.6
% of mean	ParWat352.59	124	96.4	117	108	103
rank	ParWat352.59	90	40	90	80	60
% of Paragon	ParWat352.59	105	72.6	91.6	87.7	99.3
raw	ParWat352.68	11.6	9.19	7.75	6.03	38.1
% of mean	ParWat352.68	134	96.5	87.7	93.8	94.1
rank	ParWat352.68	100	40	10	20	20
% of Paragon	ParWat352.68	113	72.7	68.9	76.2	90.9
raw	ParWat352.72	10.6	9.21	8.05	6.69	43.7
% of mean	ParWat352.72	123	96.7	91.1	104	108
rank	ParWat352.72	90	40	20	60	80
% of Paragon	ParWat352.72	104	72.9	71.6	84.5	104
raw	ParWat352.75	2.18	10.2	9.68	6.95	45.7
% of mean	ParWat352.75	25.2	107	110	108	113

rank	ParWat352.75	1	60	80	80	90
% of Paragon	ParWat352.75	21.3	80.7	86	87.8	109
raw	ParWat352.83	10.8	12	9.28	6.35	42.7
% of mean	ParWat352.83	125	126	105	98.8	105
rank	ParWat352.83	90	100	60	50	80
% of Paragon	ParWat352.83	106	95	82.5	80.2	102
raw	ParWat352.85	10.4	11.3	9.44	5.93	39.7
% of mean	ParWat352.85	120	119	107	92.2	98
rank	ParWat352.85	80	90	70	10	40
% of Paragon	ParWat352.85	102	89.4	83.9	74.9	94.7
raw	ParWat352.94	9.09	9.37	9.7	7.03	41.8
% of mean	ParWat352.94	105	98.4	110	109	103
rank	ParWat352.94	60	50	80	90	60
% of Paragon	ParWat352.94	88.8	74.1	86.2	88.8	99.8

	line	JL_11_GRYLD	SB_13_HN_GRYLD	SB_13_LN_GRYLD	RR_13_GRYLD	RR_13_HI
raw	ParWat468.5	7.53	10	8.59	5.59	40.8
% of mean	ParWat468.5	142	126	117	103	95.7
rank	ParWat468.5	90	90	80	60	40
% of Paragon	ParWat468.5	73.6	83.1	80.6	75.5	78.6
raw	ParWat468.27	0.18	11.5	9.32	7.79	44.4
% of mean	ParWat468.27	3.4	145	127	143	104
rank	ParWat468.27	1	90	90	90	60
% of Paragon	ParWat468.27	1.76	95.5	87.5	105	85.6
raw	ParWat468.29	3.86	7.33	6.26	4.76	49.5
% of mean	ParWat468.29	73	92.3	85	87.3	116
rank	ParWat468.29	20	30	20	10	90
% of Paragon	ParWat468.29	37.7	60.9	58.8	64.3	95.4
raw	ParWat468.80	8.77	7.55	8.85	4.85	46.1
% of mean	ParWat468.80	166	95.1	120	89	108
rank	ParWat468.80	90	40	90	20	80
% of Paragon	ParWat468.80	85.7	62.7	83.1	65.5	88.8