

triti. no	Label	tag	Tottillers2	browntill	brwonNod	CR2	Height2	Headno.2
1	2/49-N 31-9	9-A12	22	22	1	33.3	50	13
3	2/49-N 4-6	9-A7	11	11	1.5	50.0	51	10
5	2/49-N 4-7	9-A9	12	12	1	33.3	75	7
6	2/49-N 5-1	1-F6	3	3	1	33.3	36	2
7	2/49N 9-1	8-G7	14	8	1	19.0	60	11
9	2/49-N 8-2	9-F9	3	3	1.5	50.0	61	3
11	2/49N 9-3	1-B10	2	2	2	66.7	50	2
17	2/49N 10-4	9-C12	3	3	2	66.7	40	1
18	2/49-N 10-3	3-F11	5	5	1.5	50.0	48	4
23	2/49-N 1-11	3-A2	15	15	2	66.7	58	11
29	2/49-N 12-6	3-D2	9	9	2	66.7	48	8
32	2/49-N 22-4	1-F4	8	8	2	66.7	54	6
33	2/49-N 2-8	3-C4	4	4	1.5	50.0	65	4
38	2/49-N 3-10	9-C8	7	7	1.5	50.0	60	7
42	2/49-N 31-6	4-A12	12	12	2	66.7	52	7
48	2/49-N 5-2a	8-H1	20	20	1.5	50.0	52	18
49	2/49-N 5-2N	6-D3	3	3	2	66.7	45	3
51	2/49-N 5-3N	5-G5	3	3	1.5	50.0	42	3
53	2/49-N 7-1a	7-A7	6	6	2	66.7	50	5
56	2/49-N 7-1N	5-C5	6	6	1.5	50.0	35	4
63	2/49-N 29-12N	5-B6	3	3	1	33.3	70	3
65	2/49-N 29-12a	6-F12	7	7	1.5	50.0	62	8
68	2/49-N 29-11a	6-C11	7	7	1.5	50.0	75	6
70	2/49-N 29-10	7-F5	5	2	0.5	6.7	70	5
72	2/49-N 29-7N	6-A1	9	9	1	33.3	68	8
74	2/49-N 29-7a	6-H11	1	1	1	33.3	75	1
75	2/49-N 29-6N	7-H4	5	5	0.5	16.7	75	5
78	2/49-N 29-6a	6-G10	13	13	1	33.3	70	12
81	2/49-N 29-3N	5-A10	5	5	1	33.3	70	5
83	2/49-N 29-3a	6-H3	6	6	1.5	50.0	65	5
87	2/49-N 7-7a	6-E3	2	2	0.5	16.7	60	1
91	2/49-N 7-6	5-E1	6	6	2	66.7	63	4
93	2/49-N 7-3c	7-C10	4	4	1	33.3	62	4
98	2/49-N 7-3N	5-C10	8	8	1	33.3	65	8
103	2/49-N 7-3a	7-B3	7	7	1	33.3	60	8
111	2/49-N 31-10	4-B10	10	10	1.5	50.0	50	7
113	2/49-N 31-1	3-D6	5	5	1	33.3	64	3
118	2/49-N 29-3	8-B4	2	2	2	66.7	58	1
126	2/49-N 29-13	1-D5	12	12	1.5	50.0	71	8
130	2/49-N 29-1	9-A2	10	10	1.5	50.0	66	10
135	2/49-N 27-1	3-E10	11	11	2.5	83.3	55	11
141	2/49-N 25-6	3-A5	8	8	3	100.0	42	4
153	2/49-N 22-3	4-B3	8	8	1.5	50.0	67	8
160	2/49-N 22-2	3-E6	6	6	1	33.3	68	6
161	2/49-N 2-11	9-B4	3	3	2.5	83.3	55	2
165	2/49-N 25-5	1-A10	10	10	2	66.7	40	6
167	2/49-N 19-3	9-B10	6	6	0.5	16.7	33	4
169	2/49-N 19-2	2-C4	7	7	2	66.7	34	7
177	2/49-N 17-3	9-F8	5	5	2.5	83.3	40	5

181 2/49-N 1-7	8-C4	14	14	2	66.7	32	7
183 2/49-N 1-6	8-E4	12	12	1	33.3	50	11

Hexaploid x Durum wheat 2005 (F₄)

F4 2-49/M

Marker Regression report for 2-49/M averages from 3 plants

Using quantitative trait Crown Rot

Chi Square Stats, P = 0.05

Additive regression model

With no control for other QTLs.

141 to 145 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D/1B	wmc222	3.9	3	0.04729	19.88
1D	cf61	4.4	3	0.03516	16.80

Marker Regression report for 2-49/M averages from 3 plants

Using quantitative trait Height

Chi Square Stats, P = 0.05

Additive regression model

With no control for other QTLs.

139 to 143 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	gwm400	10.0	7	0.00159	-7.43
1D	wmc147	12.8	9	0.00035	-9.27
1D	wmc222	14.9	10	0.00011	-9.25
1D	wmc429	11.5	8	0.00070	-6.13
1D	wmc216	13.2	9	0.00028	-8.38
1D	barc169	20.7	13	0.00001	-10.01
1D	cf61	12.1	8	0.00051	-7.40
1A	gwm164	7.1	5	0.00758	3.02
1A	wmc312	7.6	5	0.00571	-3.11
1A	cfa2129	5.6	4	0.01828	-2.54
4B	gwm113	7.9	5	0.00490	-3.51
4B	gwm251	5.0	3	0.02564	-2.75
1B	gwm489	5.0	3	0.02582	-2.32

Marker Regression report for 2-49/M averages from 3 plants

Using quantitative trait Total Tillers

Chi Square Stats, P = 0.05

Additive regression model

With no control for other QTLs.

141 to 145 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	wmc147	3.9	3	0.04886	-1.08
1D	wmc222	4.1	3	0.04341	-1.04

1D	wmc429	6.3	4	0.01221	-1.00
1D	wmc216	4.4	3	0.03668	-1.04
1D	cf83	4.0	3	0.04583	-0.93
1D	cf61	12.0	8	0.00052	-1.40
1A	gwm164	7.7	5	0.00567	-0.71
4B	gwm113	6.5	4	0.01109	-0.72
1B	gwm403	4.0	3	0.04636	-0.46

Marker Regression report for 2-49/M averages from 3 plants
Using quantitative trait Brown Tillers
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
141 to 145 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	cf61	4.3	3	0.03904	-0.80
1A	gwm164	5.7	4	0.01685	-0.58
4B	gwm113	7.1	5	0.00767	-0.71

Marker Regression report for 2-49/M averages from 3 plants
Using quantitative trait Brown Nodes
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
141 to 145 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	cf61	3.9	3	0.04767	0.14

Marker Regression report for 2-49/M averages from 3 plants
Using quantitative trait Head number
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
139 to 143 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	gwm400	5.3	4	0.02113	-5.42
1D	wmc147	11.9	8	0.00056	-8.87
1D	wmc222	10.5	7	0.00119	-7.74
1D	wmc429	18.8	12	0.00001	-7.67
1D	wmc216	9.5	6	0.00206	-7.08
1D	barc169	32.2	20	0.00000	-12.12
1D	cf83	26.8	17	0.00000	-10.64
4B	gwm113	3.9	3	0.04934	-2.43
7B	gwm46a	4.1	3	0.04227	-2.65

F4 2-49/N

MarkerRegression report for 2-49/N averages from 2 plants							
Using quantitative trait Crown Rot							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
164	to	175	informative	progeny	from	Progeny	Order Internal
Chr		Locus		Stat	%	P	Add
1D/3A		wmc147		4.9	3	0.02738	12.98
1D/1B		wmc222		8.9	5	0.00281	15.89
1D/1B		wmc216		5.3	3	0.02136	13.21
1D		cf61		5.0	3	0.02534	12.71

MarkerRegression report for 2-49/N averages from 2 plants							
Using quantitative trait Height							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
162	to	173	informative	progeny	from	Progeny	Order Internal
	Chr	Locus		Stat	%	P	Add
1D		wmc147		4.7	3	0.02945	-4.02
1D		wmc222		7.0	4	0.00832	-4.39
1D		wmc429		7.3	4	0.00696	-4.70
1D		wmc216		5.8	3	0.01596	-4.33
1D		barc169		7.2	4	0.00740	-4.34
1D		cf83		5.7	3	0.01733	-3.98
1D		cf61		6.4	4	0.01139	-4.56
4B		gwm113		57.5	29	0.00000	-7.87

MarkerRegression report for 2-49/N averages from 2 plants							
Using quantitative trait Total Tillers							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
164	to	175	informative	progeny	from	Progeny	Order Internal
Chr		Locus		Stat	%	P	CI Add
1D		wmc429		3.9	2	0.04729	-0.70
1D		cf83		4.0	2	0.04648	-0.67
1A		wmc120		5.8	3	0.01615	-0.52

MarkerRegression	report	for	2-49/N	averages	from	2 plants		
Using	quantitative	trait	Brown	Nodes				
Chi	Square	Stats,	P	=	0.05			
Additive	regression	model						
With	no	control	for	other	QTLs.			
164	to	175	informative	progeny	from	Progeny	Order	Internal
Chr		Locus		Stat	%	P	Add	
1D		wmc222		6.7	4	0.00975	0.12	

MarkerRegression	report	for	2-49/N	averages	from	2 plants		
Using	quantitative	trait	Head	number				
Chi	Square	Stats,	P	=	0.05			
Additive	regression	model						
With	no	control	for	other	QTLs.			
164	to	175	informative	progeny	from	Progeny	Order	Internal
Chr		Locus		Stat	%	P	Add	
1D		wmc147		4.8	3	0.02829	-0.68	
1D		wmc429		11.6	6	0.00066	-0.99	
1D		wmc216		4.6	3	0.03277	-0.64	
1D		barc169		5.5	3	0.01944	-0.64	
1D		cf83		9.6	5	0.00190	-0.87	
1D		cf61		5.2	3	0.02288	-0.71	
1A		wmc120		8.8	5	0.00298	-0.53	

F4 2-49/O

MarkerRegression	report	for	2-49/O	2 nd	plant			
Using	quantitative	trait	Crown	Rot				
Chi	Square	Stats,	P	=	0.05			
Additive	regression	model						
With	no	control	for	other	QTLs.			
55	to	88	informative	progeny	from	Progeny	Order	Internal
Chr		Locus		Stat	%	P	Add	
1D/3A		wmc147		4.6	5	0.03191	-15.45	
1D		cf61		4.6	5	0.03191	-15.45	
7B		gwm46		5.9	7	0.01549	14.00	

MarkerRegression	report	for	2-49/O	2 nd	plant			
Using	quantitative	trait	Height					
Chi	Square	Stats,	P	=	0.05			
Additive	regression	model						
With	no	control	for	other	QTLs.			
55	to	88	informative	progeny	from	Progeny	Order	Internal

Chr	Locus	Stat	%	P	Add
1B	barc181	3.9	4	0.04827	-2.83
1D	wmc147	12.8	14	0.00035	-6.21
1D	cf61	12.8	14	0.00035	-6.21
1D	wmc222	18.6	19	0.00002	-7.13
1D	wmc429	9.4	10	0.00212	-4.98
1D	wmc216	8.9	10	0.00286	-4.83
1D	cf83	10.3	11	0.00134	-5.19
1D	gwm164b	8.8	9	0.00305	-5.04
1D	gwm6	7.2	8	0.00741	-4.49
1D	wmc324b	9.9	11	0.00163	-6.10

MarkerRegression report for 2-49/O 3rd plant
Using quantitative trait Height
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
77 to 88 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	wmc147	7.1	8	0.00784	-4.69
1D	wmc429	6.3	7	0.01198	-4.28
1D	wmc222	7.3	8	0.00694	-4.76
1D	wmc216	7.1	8	0.00767	-4.89
1D	cf83	8.1	9	0.00450	-4.86
1D	gwm164b	7.1	8	0.00776	-4.55
1D	cf61	9.3	10	0.00224	-5.45
1D	gwm6	5.5	6	0.01864	-4.18
1D	gwm515b	6.2	7	0.01254	-3.92

MarkerRegression report for 2-49/O 2nd plant
Using quantitative trait Total Tillers
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
55 to 88 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
1A	wmc278	7.6	9	0.00569		-0.62
1A	gwm164a	6.9	8	0.00854		-0.61
1A	wmc120	5.1	6	0.02410		-0.54
1D	wmc147	8.6	9	0.00334		-0.84
1D	cf61	8.6	9	0.00334		-0.84
1D	wmc222	8.8	10	0.00303		-0.82
1D	wmc429	14.0	15	0.00018		-0.97

1D	wmc216	12.6	13	0.00038	-0.93
1D	cf83	14.5	15	0.00014	-0.99
1D	gwm164b	11.1	12	0.00086	-0.92
1D	gwm6	11.7	12	0.00062	-0.92

MarkerRegression report for 2-49/O 3rd plant
Using quantitative trait Total Tillers
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
77 to 88 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
1A	wmc278	6.5	7	0.01082		-0.59
1A	gwm164a	6.8	8	0.00890		-0.58
1D	wmc147	4.6	5	0.03158		-0.62
1D	wmc429	8.3	9	0.00390		-0.80
1D	wmc222	4.1	5	0.04351		-0.58
1D	cf83	5.8	6	0.01626		-0.67
1D	gwm164b	5.3	6	0.02127		-0.64
1D	cf61	4.9	5	0.02668		-0.65

MarkerRegression report for 2-49/O 2nd plant
Using quantitative trait Brown Tillers
Chi Square Stats, P = 0.05
Additive regression model
With no control for other QTLs.
55 to 88 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1A	wmc278	5.2	6	0.02279	-0.58
1A	gwm164a	4.8	5	0.02801	-0.57
1A	wmc120	4.8	5	0.02914	-0.59
1D	wmc147	6.8	7	0.00908	-0.84
1D	cf61	6.8	7	0.00908	-0.84
1D	wmc222	5.9	6	0.01545	-0.75
1D	wmc429	7.2	8	0.00729	-0.79
1D	wmc216	7.4	8	0.00657	-0.80
1D	cf83	8.7	9	0.00322	-0.87
1D	gwm164b	7.5	8	0.00622	-0.85
1D	gwm6	4.5	5	0.03422	-0.65

MarkerRegression report for 2-49/O 3 rd plant							
Using quantitative trait Brown Tillers							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
77	to	88	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1A		wmc278	6.7	8	0.00973	-0.66	
1A		gwm164a	8.0	9	0.00471	-0.70	
1D		wmc429	5.8	6	0.01617	-0.75	

MarkerRegression report for 2-49/O 2 nd plant							
Using quantitative trait Brown Nodes							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
55	to	88	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1D		wmc147	5.3	6	0.02120	-0.15	
1D		cf61	5.3	6	0.02120	-0.15	
4B		gwm251	4.0	5	0.04578	0.10	
7B		gwm46	5.1	6	0.02325	0.12	

MarkerRegression report for 2-49/O 2 nd plant							
Using quantitative trait Head number							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
55	to	88	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1D		wmc429	8.1	9	0.00449	-2.67	
1D		wmc216	7.8	8	0.00537	-2.61	
1D		cf83	8.2	9	0.00421	-2.69	
1D		gwm164b	8.1	9	0.00434	-2.81	
1D		gwm6	7.2	8	0.00729	-2.60	
7B		gwm471	4.2	5	0.03960	-2.07	

MarkerRegression report for 2-49/O 3 rd plant							
Using quantitative trait Head number							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
77	to	88	informative	progeny	from	Progeny	Order Internal
Chr			Locus	Stat	%	P	Add
1D			wmc147	6.5	7	0.01053	-2.61
1D			wmc429	6.5	7	0.01108	-2.50
1D			wmc222	6.1	7	0.01345	-2.52
1D			wmc216	6.6	7	0.01022	-2.73
1D			cf83	6.2	7	0.01266	-2.48
1D			gwm164b	6.0	7	0.01419	-2.43
1D			cf61	6.8	7	0.00921	-2.70
1D			gwm6	4.4	5	0.03499	-2.17
1D			gwm515b	4.6	5	0.03145	-1.96
7B			gwm471	5.2	6	0.02207	-2.53

2005 Bulk Segregant Analysis (F₄)

F4 BSA 2-49/M

MarkerRegression report for set BSA 2-49/M							
Using quantitative trait Crown Rot							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
26	to	30	informative	progeny	from	Progeny	Order Internal
Chr			Locus	Stat	%	P	CI Add
5B			gwm234	4.0	14	0.04428	-32.81
5B			gwm540	4.5	16	0.03326	39.03
6B			barc134	not	informative		
5A			gwm291	4.5	14	0.03325	-35.23

F4 BSA 2-49/N

MarkerRegression report for set BSA 2-4/B							
Using quantitative trait Crown Rot							
Chi Square Stats, P = 0.05							
Additive regression model							
With no control for other QTLs.							
18	to	30	informative	progeny	from	Progeny	Order Internal
Chr			Locus	Stat	%	P	Add
3A			cfa2134	5.2	16	0.02245	-33.89

5B	gwm234	6.2	19	0.01288	-39.13
6B	barc134	not	informative		
1B	barc181	4.9	16	0.02759	-36.09

F4 BSA 2-49/O

MarkerRegression report for set BSA 2-49/O
 Using quantitative trait Crwon Rot
 Chi Square Stats, P = 0.05
 Additive regression model
 With no control for other QTLs.
 18 to 24 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
5A	barc134	8.1	32	0.00449	-50.29
5A	barc100	4.0	15	0.04581	-33.47
5A	barc165	16.5	50	0.00005	-61.94
5A	wmc150B	4.9	19	0.02618	-39.56
6A	wmc256	4.5	17	0.03355	-45.82
1D	wmc222	5.9	23	0.01498	-46.41

2006 2-49/N (F5)

(plants with 30 highest & 30 lowest CR scores)

MarkerRegression report for set 2-49 B 2006
 Using quantitative trait Crown Rot
 Chi Square Stats, P = 0.05
 Additive regression model
 With no control for other QTLs. Using CRave for trait variances
 50 to 60 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	Add
1D	cf61	4.2	7	0.04020	5.32
1D	cf83	4.3	7	0.03728	5.38
1D	wmc222	4.2	7	0.04122	5.30
2D	gwm515	5.3	9	0.02082	5.77
5D/5A	gwm121	4.8	8	0.02902	5.15
1A	wmc278	4.4	8	0.03658	6.12

MarkerRegression report for set 2-49 B 2006
 Using quantitative trait Height
 Chi Square Stats, P = 0.05
 Additive regression model
 With no control for other QTLs.
 49 to 59 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
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1D	cfd83	4.8	8	0.02886	-6.36
1D	gwm164	5.3	9	0.02192	-6.55
4B	gwm113	14.5	22	0.00014	-6.86
5A	gwm291	6.2	11	0.01312	-5.21
5A	cfa2141	4.0	7	0.04651	4.18

MarkerRegression report for set 2-49 B 2006								
Using quantitative trait Total Tillers								
Chi Square Stats, P = 0.05								
Additive regression model								
With no control for other QTLs.								
50	to	60	informative	progeny	from	Progeny	Order	Internal
Chr		Locus	Stat	%	P	Add		
4B		gwm113	4.0	7	0.04567	-0.66		
7B		gwm471	4.7	8	0.02969	-0.76		

MarkerRegression report for set 2-49 B 2006								
Using quantitative trait B rown Nodes								
Chi Square Stats, P = 0.05								
Additive regression model								
With no control for other QTLs.								
50	to	60	informative	progeny	from	Progeny	Order	Internal
Chr		Locus	Stat	%	P	Add		
5A		gwm291	4.0	7	0.04634	0.16		
5A		barc197	4.3	7	0.03711	-0.14		

2007 2-49/N (F6)

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MarkerRegression report for set 2-49/N boxes 8,9								
Using quantitative trait Crown Rot								
Chi Square Stats, P = 0.05								
Additive regression model								
With no control for other QTLs.								
38	to	146	informative	progeny	from	Progeny	Order	Internal
Chr		Locus	Stat	%	P	Add		
1D		wmc147	not	informative				
1D		wmc222	5.8	14	0.01576	18.13		
1A		wmc120	5.1	4	0.02449	-5.71		
MarkerRegression report for set 2-49/N boxes 8,9								

MarkerRegression	report	for	set	2-49/N boxes	8,9		
Using	quantitative	trait	Total Tillers				
Chi Square	Stats, P	=	0.05				
Additive	regression	model					
With	no	control for	other	QTLs.			
45	to	176	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1A		gwm164	4.9	3	0.02677	-1.04	

MarkerRegression	report	for	set	2-49/N boxes	8,9		
Using	quantitative	trait	Brown Tillers				
Chi Square	Stats, P	=	0.05				
Additive	regression	model					
With	no	control for	other	QTLs.			
38	to	146	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1D		wmc147	not	informative			
1A		gwm164	4.1	3	0.04280	-0.89	

MarkerRegression	report	for	set	2-49/N boxes	8,9		
Using	quantitative	trait	Brown Nodes				
Chi Square	Stats, P	=	0.05				
Additive	regression	model					
With	no	control for	other	QTLs.			
38	to	146	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1D		wmc147	not	informative			
1D		wmc222	6.3	15	0.01188	0.55	
1A		wmc120	5.1	4	0.02437	-0.17	

MarkerRegression	report	for	set	2-49/N boxes	8,9		
Using	quantitative	trait	Head number				
Chi Square	Stats, P	=	0.05				
Additive	regression	model					
With	no	control for	other	QTLs.			
41	to	156	informative	progeny	from	Progeny	Order Internal
Chr		Locus	Stat	%	P	Add	
1A		gwm164	5.6	4	0.01815	-0.97	

2-49 B, F7 (analysed with F6 traits)**51 plants with highest CR scores/ family**

Marker Regression report for set 51 mapmanager wo linkage groups(Set Name)

Using quantitative trait CR2

Chi Square Stats, P = 0.05

Additive regression model

With no control for other QTLs.

42 to 51 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
1A	:: wPt-9266	5.1	10	0.02394		6.24
1A	:: wPt-3462	5.5	10	0.01857		7.27
1A	:: wPt5704	5.4	10	0.02001		6.63
1A	:: wPt-3904	6.7	12	0.00965		8.31
1A	:: tPt-0799	6.5	12	0.01093		7.57
1A	:: wPt-2872	5.1	10	0.02362		6.15
1A	:: wPt-5968	5.9	11	0.01488		6.61
1A	:: wPt-8478	6.0	11	0.01400		6.74
1A	:: wPt-3867	6.0	11	0.01421		7.49
1A	:: tPt-1041	11.8	21	0.00060		12.89
1A	:: wPt-5647	13.3	23	0.00026		15.29
1A	:: wPt-4197	11.7	20	0.00064		13.55
1A	:: wPt-6245	11.7	20	0.00064		13.55
1A	:: wPt-1247	12.0	21	0.00052		13.60
1A	:: wPt6932	13.2	23	0.00028		12.83
1A	:: tPt-8831	14.8	25	0.00012		14.27
1A	:: wPt6959	14.8	25	0.00012		14.27
1A	:: wPt0689	14.8	25	0.00012		14.27
1A	:: wPt9679	14.8	25	0.00012		14.27
1A	:: wPt1634	16.2	27	0.00006		13.92
1A	:: wPt-3836	20.4	28	0.00025		15.06
1A	:: wPt3774	16.2	27	0.00006		13.33
1A	:: wPt2119	16.5	28	0.00005		12.95
1A	:: wPt8238	15.0	25	0.00011		12.38
1A	:: wPt2714	14.6	25	0.00013		12.70
1A	:: wPt-6604	9.9	18	0.00165		9.68
1A	:: rPt-3056	8.9	16	0.00285		8.77
1B	:: wPt-0260	3.9	7	0.04793		5.53
1B	:: tPt-1772	4.8	9	0.02853		5.91
1B	:: wPt-8949	4.1	8	0.04343		5.66
2A	:: wPt-6687	4.8	9	0.02884		6.22
2A	:: wPt-7901	4.1	8	0.04265		5.67
2A	:: wPt-2448	4.0	7	0.04625		5.84
2B	:: wPt5228	4.0	8	0.04534		5.43
2B	:: wPt5172	4.0	8	0.04534		5.43
2B	:: tPt1253	4.0	8	0.04534		5.43

2B	:: tPt4184	9.1	16	0.00256	8.41
2B	:: wPt8398	13.0	23	0.00031	9.89
2B	:: wPt-8326	7.5	14	0.00634	7.39
2B	:: wPt-8004	7.0	13	0.00826	7.20
2B	:: wPt-8284	5.4	10	0.01971	6.96
2B	:: wPt1294	7.2	13	0.00732	7.94
2B	:: wPt-6805	6.6	12	0.01014	7.68
2B	:: wPt-0100	8.2	15	0.00429	8.45
2B	:: wPt7343	6.0	11	0.01439	6.93
2B	:: wPt7784	6.9	13	0.00848	7.56
2B	:: wPt-3388	7.8	14	0.00515	8.11
2B	:: wPt-7970	4.2	8	0.03971	6.45
3A	:: wPt9832	6.5	12	0.01086	-6.93
3A	:: wPt-7890	8.3	15	0.00400	7.88
3A	:: wPt-1353	8.8	16	0.00294	8.03
3A	:: wPt5876	8.0	15	0.00475	7.66
3A	:: wPt8779	13.6	24	0.00023	9.45
3A	:: wPt4408	12.3	22	0.00045	8.99
3B	:: wPt-3609	3.9	7	0.04853	5.57
3B	:: wPt-6066	7.2	13	0.00726	7.38
3B	:: rPt-5853	7.4	14	0.00644	7.60
3B	:: tPt-8143	7.6	14	0.00577	7.72
3B	:: tPt-9273	6.0	11	0.01430	6.80
3B	:: wPt-4842	7.9	14	0.00498	7.57
3B	:: tPt-6487	5.6	10	0.01751	6.61
3B	:: wPt-7212	4.5	8	0.03426	5.97
3B	:: wPt-0021	5.1	10	0.02342	6.13
3B	:: wPt-8752	4.6	9	0.03287	5.94
3B	:: wPt-3638	5.4	10	0.01980	7.01
4A	:: wPt-2331	5.2	10	0.02282	-6.11
4A	:: wPt-9196	5.5	10	0.01917	-6.72
4A	:: wPt-3796	6.4	12	0.01172	-6.90
4A	:: wPt-9183	7.0	13	0.00826	-7.20
4A	:: wPt-2985	6.2	12	0.01254	-7.93
4A	:: wPt-8271	6.2	11	0.01288	-6.83
4A	:: wPt-3108	4.8	9	0.02786	-6.01
4A	:: wPt-8886	4.2	8	0.04029	-5.56
4A	:: wPt8040	5.1	9	0.02427	-6.21
4B	:: wPt3451	6.5	13	0.01086	7.16
4B	:: wPt2430	5.9	11	0.01501	7.10
4B	:: wPt-5996	11.1	20	0.00085	12.09
4B	:: wPt-3804	14.8	25	0.00012	14.27
4B	:: wPt3094	17.8	29	0.00003	14.39
4B	:: wPt8144	4.0	8	0.04548	8.33
4B	:: wPt-2077	12.6	22	0.00039	9.88
4B	:: tPt-2163	13.8	24	0.00021	9.83
4B	:: tPt-5342	7.0	13	0.00825	9.01
4B	:: wPt3978	4.3	8	0.03711	5.90
4B	:: wPt7108	5.3	10	0.02103	6.65
4B	:: wPt-1708	6.9	13	0.00886	7.32

4B	:: wPt-4199	4.4	9	0.03516	5.84
5B	:: tPt7980	4.6	9	0.03188	8.76
5B	:: wPt-2998	11.5	20	0.00071	9.99
5B	:: wPt-2548	9.5	17	0.00209	8.46
5B	:: wPt1684	5.3	10	0.02154	6.37
5B	:: wPt8417	4.5	8	0.03366	5.82
5B	:: wPt3744	4.0	8	0.04462	5.59
5B	:: wPt-4248	6.1	11	0.01332	6.92
5B	:: wPt-1261	6.8	12	0.00934	6.96
5B	:: wPt-3931	7.4	14	0.00653	7.52
5B	:: wPt-8623	9.8	18	0.00171	8.72
5B	:: wPt-5416	7.3	13	0.00675	7.65
5B	:: wPt-9273	7.1	13	0.00775	8.87
5B	:: wPt-4327	8.6	15	0.00344	8.14
5B	:: wPt-5093	8.9	16	0.00285	8.06
5B	:: wPt-9820	8.3	15	0.00407	7.89
5B	:: wPt-1496	8.3	15	0.00390	7.89
5B	:: wPt-7476	8.9	16	0.00285	8.06
5B	:: wPt-8038	8.8	16	0.00304	8.01
5B	:: wPt7187	5.1	10	0.02348	6.80
6B	:: wPt4127	4.2	8	0.03970	5.80
6B	:: wPt5562	3.9	7	0.04725	5.45
6B	:: wPt-9990	4.9	9	0.02644	6.03
6B	:: wPt-7150	4.9	9	0.02720	5.96
6B	:: wPt-4283	4.9	9	0.02720	5.96
6B	:: wPt-5234	4.9	9	0.02720	5.96
6B	:: wPt-8015	6.2	12	0.01250	6.80
6B	:: wPt-4720	5.0	9	0.02473	6.13
6B	:: wPt-1089	4.9	9	0.02720	5.96
6B	:: wPt-6674	5.5	10	0.01871	6.37
6B	:: wPt6361	3.9	7	0.04725	5.45
6B	:: wPt4625	4.1	8	0.04258	5.68
6B	:: tPt-3506	15.0	25	0.00011	10.40
6B	:: wPt0797	12.1	21	0.00051	9.18
6B	:: wPt8744	11.9	21	0.00056	9.04
6B	:: wPt-5408	11.1	20	0.00086	8.84
6B	:: wPt-1730	4.5	8	0.03440	5.97
6B	:: wPt-1762	3.9	7	0.04906	5.75
6B	:: wPt-9952	5.9	11	0.01490	6.77
6B	:: wPt-9256	8.9	16	0.00278	8.20
6B	:: wPt-4164	6.3	12	0.01193	6.83
6B	:: wPt7339	7.2	13	0.00723	7.38
6B	:: wPt7757	8.7	16	0.00314	7.91
7A	:: wPt0980	4.3	8	0.03733	5.61
7A	:: wPt-6273	6.1	11	0.01336	7.20
7A	:: wPt-4172	6.2	11	0.01293	6.74
7A	:: wPt-8418	3.9	7	0.04822	5.56
7A	:: wPt6785	5.0	9	0.02522	6.16
7A	:: wPt-0008	6.1	11	0.01340	6.70
7A	:: wPt-7151	6.1	11	0.01340	6.70

7A	:: wPt-4877	7.5	14	0.00613	-7.36
7A	:: wPt-4721	5.9	11	0.01499	-6.67
7A	:: wPt-6217	6.6	12	0.01030	-6.83
7B	:: wPt-4258	4.1	8	0.04165	-5.72
7B	:: wPt-3107	7.8	14	0.00519	7.60
7B	:: wPt-5906	5.7	11	0.01698	6.56
7B	:: wPt-8096	6.8	12	0.00911	7.46
7B	:: tPt4246	4.3	8	0.03733	5.61
7B	:: wPt8155	5.5	10	0.01858	6.35
7B	:: wPt7577	6.6	12	0.01014	7.02
7B	:: wPt8555	4.7	9	0.02936	6.04
7B	:: rPt0996	7.4	13	0.00658	7.71
7B	:: wPt-5769	7.1	13	0.00780	7.22
7B	:: wPt-7186	6.7	12	0.00966	7.30
7B	:: wPt7318	5.7	11	0.01679	6.63
7B	:: wPt2847	5.7	11	0.01720	6.62
7B	:: wPt-0504	8.2	15	0.00414	7.73
7B	:: tPt-3700	9.5	17	0.00206	8.13
7B	:: tPt-8504	7.3	13	0.00687	7.30
7B	:: wPt-7113	10.0	18	0.00158	8.55
7B	:: wPt1770	7.9	14	0.00484	7.42
7B	:: wPt3729	11.2	20	0.00081	9.22
7B	:: wPt6274	9.2	16	0.00245	8.45
7B	:: wPt-0600	8.5	15	0.00355	7.79
7B	:: wPt-1149	12.0	21	0.00054	10.10
7B	:: wPt-2305	8.3	15	0.00396	7.75
7B	:: wPt0036	10.0	18	0.00161	8.37
7B	:: wPt-7887	10.3	18	0.00130	-10.16
7B	:: wPt-5892	10.3	18	0.00130	-10.16
7B	:: rPt7068	8.2	15	0.00412	-8.42
7B	:: wPt6223	9.0	16	0.00271	-8.73
7B	:: wPt0128	7.3	13	0.00693	-7.92
7B	:: wPt-6690	5.1	9	0.02459	-6.15

Marker Regression report for set 51 mapmanager(Set Name)

Using quantitative trait Height

Chi Square Stats, P = 0.05

Additive regression model

With no control for other QTLs.

42 to 51 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
1A	:: wPt-9266	10.1	18	0.00151		-5.33
1A	:: wPt-3462	10.7	19	0.00108		-6.14
1A	:: wPt5704	8.7	16	0.00322		-5.15
1A	:: wPt-3904	14.0	24	0.00019		-7.23
1A	:: tPt-0799	16.1	27	0.00006		-7.12
1A	:: wPt-5968	4.5	8	0.03404		-3.61

1A	:: wPt-8478	3.9	7	0.04946	-3.39
1A	:: wPt-3867	11.0	19	0.00092	-6.16
1A	:: tPt-1041	6.6	12	0.01016	-6.17
1A	:: wPt-5647	5.0	9	0.02511	-6.08
1A	:: wPt-4197	6.6	12	0.01039	-6.49
1A	:: wPt-6245	8.3	15	0.00401	-7.23
1A	:: wPt6932	7.2	13	0.00748	-6.06
1A	:: tPt-8831	4.3	8	0.03903	-5.01
1A	:: wPt6959	4.3	8	0.03903	-5.01
1A	:: wPt0689	4.3	8	0.03903	-5.01
1A	:: wPt9679	4.3	8	0.03903	-5.01
1A	:: wPt1634	4.3	8	0.03914	-4.71
1A	:: wPt3774	8.3	15	0.00403	-6.15
1A	:: wPt2119	8.4	15	0.00373	-5.98
1A	:: wPt8238	10.4	18	0.00126	-6.57
1A	:: wPt2714	9.2	17	0.00239	-6.44
1A	:: wPt-6604	10.4	19	0.00123	-6.18
1A	:: rPt-3056	11.2	20	0.00082	-6.06
1A	:: wPt-3836	19.4	34	0.00001	-7.91
1B	:: wPt-4129	3.9	7	0.04804	3.54
1B	:: wPt1313	4.1	8	0.04320	-3.42
1B	:: wPt-5801	4.9	9	0.02627	-3.78
1B	:: wPt-2575	4.9	9	0.02634	-3.81
1B	:: tPt-1772	7.0	13	0.00824	-4.40
1B	:: wPt-8949	5.2	10	0.02234	-3.96
1B	:: wPt8892	6.9	13	0.00853	-4.34
2B	:: wPt-5788	6.9	13	0.00851	4.60
2B	:: wPt-5513	8.4	15	0.00373	5.06
2B	:: wPt0459	8.3	15	0.00400	-5.08
2B	:: wPt-0100	3.9	7	0.04745	-3.73
2B	:: wPt7343	4.7	9	0.03072	-3.84
3B	:: wPt-7984	4.3	8	0.03709	-3.57
3B	:: wPt3424	4.5	8	0.03416	-3.70
3B	:: tPt9048	9.0	16	0.00275	-5.23
3B	:: wPt-3609	9.8	17	0.00175	-5.35
3B	:: wPt0002	9.0	16	0.00275	-5.23
3B	:: wPt8266	7.2	13	0.00718	-4.79
3B	:: wPt4773	5.6	10	0.01809	-4.16
3B	:: wPt-2757	5.5	10	0.01914	-4.11
3B	:: wPt-6066	15.6	26	0.00008	-6.50
3B	:: rPt-5853	15.0	26	0.00010	-6.51
3B	:: tPt-8143	15.4	26	0.00009	-6.59
3B	:: tPt-9273	12.9	22	0.00033	-6.02
3B	:: wPt4900	7.1	13	0.00777	-4.49
4A	:: wPt-9418	4.5	8	0.03394	-3.58
4A	:: wPt-4424	3.9	7	0.04827	-3.44
4A	:: wPt8040	7.3	13	0.00703	4.58
4B	:: wPt-3804	4.3	8	0.03903	-5.01
4B	:: wPt3094	4.9	9	0.02634	-5.02
4B	:: wPt8144	5.0	9	0.02502	-5.79

4B	:: wPt-2077	6.7	12	0.00946	-4.63
4B	:: tPt-2163	20.9	34	0.00000	-7.30
4B	:: tPt-5342	10.7	19	0.00106	-6.83
4B	:: wPt3978	5.7	11	0.01660	-4.20
4B	:: wPt7108	9.9	18	0.00169	-5.52
5A	:: wPt-9887	4.0	8	0.04583	3.94
5B	:: wPt-2998	14.9	25	0.00011	-6.98
5B	:: wPt-2548	14.1	24	0.00018	-6.28
5B	:: wPt-4248	8.6	16	0.00336	-5.05
5B	:: wPt-1261	13.2	23	0.00028	-5.88
5B	:: wPt-3931	13.2	23	0.00028	-6.09
5B	:: wPt-8623	15.1	26	0.00010	-6.57
5B	:: wPt-5416	13.1	23	0.00030	-6.20
5B	:: wPt-9273	12.4	22	0.00043	-7.13
5B	:: wPt-4327	13.9	24	0.00020	-6.30
5B	:: wPt-5093	16.3	27	0.00005	-6.56
5B	:: wPt-9820	14.5	25	0.00014	-6.33
5B	:: wPt-1496	21.4	34	0.00000	-7.41
5B	:: wPt-7476	19.3	31	0.00001	-7.04
5B	:: wPt-8038	19.2	31	0.00001	-7.03
6B	:: tPt-3506	6.9	13	0.00866	-4.56
6B	:: wPt-1730	3.8	7	0.04987	-3.46
6B	:: wPt-1762	5.2	10	0.02303	-4.11
6B	:: wPt-9952	6.1	11	0.01342	-4.28
6B	:: wPt-9256	10.0	18	0.00157	-5.38
6B	:: wPt-4164	8.6	15	0.00341	-4.91
6B	:: wPt7339	7.3	13	0.00683	-4.63
6B	:: wPt7757	9.1	17	0.00256	-5.16
7A	:: wPt-4877	11.5	20	0.00070	5.56
7A	:: wPt-4721	10.5	19	0.00117	5.42
7A	:: wPt-6217	9.1	16	0.00254	4.95
7B	:: wPt-6869	3.8	7	0.04985	-3.51
7B	:: wPt-3439	4.0	8	0.04452	-3.55
7B	:: wPt-3107	10.0	18	0.00154	-5.31
7B	:: wPt-5906	9.9	18	0.00169	-5.27
7B	:: wPt-8096	10.2	18	0.00138	-5.61
7B	:: tPt4246	14.6	25	0.00014	-6.10
7B	:: wPt8155	15.3	26	0.00009	-6.28
7B	:: wPt7577	14.4	25	0.00015	-6.23
7B	:: wPt8555	9.1	16	0.00258	-5.10
7B	:: rPt0996	10.7	19	0.00110	-5.68
7B	:: wPt-5769	12.7	22	0.00037	-5.86
7B	:: wPt-7186	9.4	17	0.00213	-5.33
7B	:: wPt7318	5.2	10	0.02324	-3.93
7B	:: wPt2847	6.1	11	0.01377	-4.26
7B	:: wPt-0504	5.8	11	0.01587	-4.10
7B	:: tPt-3700	6.9	13	0.00843	-4.39
7B	:: tPt-8504	7.7	14	0.00554	-4.66
7B	:: wPt-7113	5.3	10	0.02141	-3.97
7B	:: wPt1770	7.3	13	0.00690	-4.45

7B	:: wPt3729	7.0	13	0.00827	-4.62
7B	:: wPt6274	9.4	17	0.00218	-5.32
7B	:: wPt-0600	7.6	14	0.00583	-4.61
7B	:: wPt-1149	11.2	20	0.00082	-6.11
7B	:: rPt7068	9.5	17	0.00206	5.60
7B	:: wPt6223	10.7	19	0.00107	5.89
7B	:: wPt0128	9.6	17	0.00198	5.60
7B	:: wPt-6690	3.9	7	0.04823	3.39

191 plants (whole population), only LRS scores > 17

Marker Regression report for set Combined map.Doub(Set Name)

Using quantitative trait CR2

Chi Square Stats, P = 0.05

Additive regression model

With no control for other QTLs.

168 to 191 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
1A	:: wPt-9266	21.6	11	0.00000		7.68
1A	:: wPt-3462	18.4	9	0.00002		7.38
1A	:: wPt5704	22.6	11	0.00000		8.08
1A	:: wPt-3904	35.6	17	0.00000		10.68
1A	:: tPt-0799	35.9	17	0.00000		10.31
1A	:: wPt-2872	28.5	14	0.00000		8.80
1A	:: wPt-5968	29.1	14	0.00000		8.62
1A	:: wPt-8478	29.6	14	0.00000		8.72
1A	:: wPt-1720	19.7	10	0.00001		7.53
1A	:: wPt-3867	39.9	19	0.00000		11.02
1A	:: tPt-1041	29.3	14	0.00000		13.52
1A	:: wPt-5647	30.2	15	0.00000		14.73
1A	:: wPt-4197	28.2	14	0.00000		13.82
1A	:: wPt-6245	28.1	14	0.00000		13.92
1A	:: wPt-1247	36.9	18	0.00000		13.77
1A	:: wPt-3836	63.2	28	0.00000		14.81
1A	:: wPt6932	41.3	19	0.00000		14.32
1A	:: tPt-8831	41.6	20	0.00000		14.57
1A	:: wPt6959	41.1	19	0.00000		14.93
1A	:: wPt0689	40.6	19	0.00000		14.70
1A	:: wPt9679	35.1	17	0.00000		13.64
1A	:: wPt1634	38.0	18	0.00000		13.49
1A	:: wPt3774	48.1	22	0.00000		15.02
1A	:: wPt2119	47.0	22	0.00000		14.70
1A	:: wPt8238	48.0	22	0.00000		14.75
1A	:: wPt2714	43.5	20	0.00000		13.88
1B	:: wPt-0260	17.5	9	0.00003		6.83
1B	:: wPt-5801	17.9	9	0.00002		6.90
1B	:: wPt-2575	15.5	8	0.00008		6.46

1B	:: tPt-1772	22.0	11	0.00000	7.48
1B	:: wPt-8949	16.4	8	0.00005	6.74
1B	:: wPt-8320	10.5	5	0.00117	5.20
1B	:: wPt8079	16.2	9	0.00006	6.68
2A	:: wPt6014	17.9	9	0.00002	6.92
2B	:: wPt5228	20.3	10	0.00001	7.29
2B	:: wPt5172	20.8	10	0.00001	7.34
2B	:: tPt1253	24.6	12	0.00000	8.01
2B	:: wPt9833	20.9	10	0.00000	7.43
2B	:: wPt0286	17.3	9	0.00003	6.72
2B	:: wPt1646	18.5	9	0.00002	7.18
2B	:: wPt-0462	22.5	11	0.00000	7.95
2B	:: wPt-4301	18.7	9	0.00002	7.42
2B	:: tPt4184	28.0	14	0.00000	9.11
2B	:: wPt8398	33.3	16	0.00000	9.92
2B	:: wPt-8326	30.2	15	0.00000	9.44
2B	:: wPt-8004	19.5	10	0.00001	7.48
2B	:: wPt1294	18.7	9	0.00001	7.55
2B	:: wPt-0100	16.8	8	0.00004	7.12
2B	:: wPt7343	17.9	9	0.00002	7.27
2B	:: wPt-3388	20.5	10	0.00001	8.09
3A	:: wPt-7890	17.1	9	0.00004	6.68
3A	:: wPt-1353	17.5	9	0.00003	6.80
4A	:: wPt-9418	17.8	9	0.00002	6.73
4A	:: wPt-4424	15.9	8	0.00007	6.68
4A	:: wPt-1155	16.4	8	0.00005	6.49
4B	:: wPt3451	15.4	9	0.00009	6.90
4B	:: wPt2430	19.5	10	0.00001	7.65
4B	:: wPt-5996	20.9	10	0.00000	9.96
4B	:: wPt-3804	34.3	16	0.00000	13.05
4B	:: wPt3094	45.8	21	0.00000	14.40
4B	:: wPt8144	18.7	9	0.00002	12.14
4B	:: wPt-2077	27.8	14	0.00000	9.04
4B	:: tPt-2163	36.9	18	0.00000	9.95
4B	:: tPt-5342	19.0	9	0.00001	8.52
4B	:: wPt3978	16.1	8	0.00006	6.54
4B	:: wPt7108	20.9	10	0.00000	7.43
4B	:: wPt-1708	16.0	8	0.00006	6.51
4B	:: wPt-4199	13.7	7	0.00022	5.99
5B	:: wPt-3931	19.0	9	0.00001	7.09
6B	:: wPt-9256	17.7	9	0.00003	6.96
7A	:: wPt0980	24.8	12	0.00000	7.90
7A	:: wPt-6273	23.0	11	0.00000	7.82
7A	:: wPt-4172	26.1	13	0.00000	8.06
7A	:: wPt8216	31.6	15	0.00000	8.88
7A	:: wPt8796	22.8	11	0.00000	7.60
7A	:: wPt5411	23.6	12	0.00000	7.68
7A	:: wPt9306	21.3	11	0.00000	7.39
7A	:: wPt-8418	20.3	10	0.00001	7.31
7A	:: wPt-0744	22.5	11	0.00000	7.53

7A	:: wPt-5590	21.9	11	0.00000	7.41
7A	:: wPt6785	29.9	15	0.00000	8.56
7A	:: wPt-0008	19.7	10	0.00001	7.19
7A	:: wPt-7151	22.9	11	0.00000	7.58
7A	:: wPt-4877	22.3	11	0.00000	-7.67
7A	:: wPt-4721	28.5	14	0.00000	-8.77
7A	:: wPt-6217	22.5	11	0.00000	-7.62
7B	:: wPt-3107	27.1	13	0.00000	8.19
7B	:: wPt-5906	25.0	12	0.00000	7.95
7B	:: wPt-8096	26.1	13	0.00000	8.43
7B	:: t4246	17.5	9	0.00003	6.63
7B	:: wPt8155	23.0	11	0.00000	7.67
7B	:: wPt7577	31.7	15	0.00000	8.85
7B	:: wPt8555	32.4	16	0.00000	9.07
7B	:: rPt0996	28.1	14	0.00000	8.79
7B	:: wPt-5769	30.1	15	0.00000	8.68
7B	:: wPt-7186	26.7	13	0.00000	8.34
7B	:: wPt7318	17.1	9	0.00004	6.78
7B	:: wPt2847	19.9	10	0.00001	7.32
7B	:: wPt-0504	21.4	11	0.00000	7.46
7B	:: tPt-3700	21.0	10	0.00000	7.25
7B	:: tPt-8504	18.6	9	0.00002	6.87
7B	:: wPt-7113	21.2	10	0.00000	7.39
7B	:: wPt1770	25.8	13	0.00000	8.02
7B	:: wPt3729	28.0	14	0.00000	8.68
7B	:: wPt6274	27.2	13	0.00000	8.52
7B	:: wPt-1149	19.6	10	0.00001	7.73
7B	:: wPt-2305	9.6	5	0.00191	5.03
7B	:: wPt-7887	21.0	10	0.00000	-8.85
7B	:: wPt-5892	24.8	12	0.00000	-9.86
7B	:: rPt7068	17.0	8	0.00004	-7.29
7B	:: wPt6223	18.7	9	0.00002	-7.65
7B	:: wPt0128	17.6	9	0.00003	-7.39
1D	:: wPt-4830	18.6	9	0.00002	7.03
1D	:: wPt-0298	19.0	9	0.00001	7.09
3D	:: wPt-4476	18.0	9	0.00002	7.01
7D	:: wPt-4115	17.3	9	0.00003	6.93
7D	:: wPt-0695	17.1	9	0.00003	6.88

Marker Regression report for set Combined map.Doub(Set Name)
Using quantitative trait Height2
Chi Square Stats, P = 0.01
Additive regression model
With no control for other QTLs.
167 to 190 informative progeny from Progeny Order Internal

Chr	Locus	Stat	%	P	CI	Add
1A	:: wPt-2527	7.4	4	0.00670		-2.50
1A	:: wPt-9266	31.8	15	0.00000		-5.26

1A	:: wPt-3462	33.7	16	0.00000	-5.60
1A	:: wPt5704	36.0	17	0.00000	-5.73
1A	:: wPt-3904	44.1	21	0.00000	-6.73
1A	:: tPt-0799	45.9	21	0.00000	-6.59
1A	:: wPt-5968	8.7	4	0.00314	-2.76
1A	:: wPt-8478	10.1	5	0.00145	-2.99
1A	:: wPt-3867	40.8	19	0.00000	-6.37
1A	:: wPt-1247	8.3	4	0.00394	-3.86
1A	:: wPt6932	13.1	7	0.00030	-4.75
1A	:: tPt-8831	11.3	6	0.00078	-4.49
1A	:: wPt6959	7.3	4	0.00701	-3.73
1A	:: wPt0689	9.4	5	0.00222	-4.18
1A	:: wPt9679	7.4	4	0.00656	-3.69
1A	:: wPt1634	11.8	6	0.00060	-4.42
1A	:: wPt3774	13.3	7	0.00027	-4.69
1A	:: wPt2119	11.4	6	0.00072	-4.32
1A	:: wPt8238	12.0	6	0.00053	-4.39
1A	:: wPt2714	12.0	6	0.00054	-4.31
1A	:: wPt-6604	52.0	24	0.00000	-6.69
1A	:: rPt-3056	52.3	24	0.00000	-6.60
1A	:: wPt-3836	30.2	16	0.00000	-5.83
1B	:: wPt-5865	17.8	9	0.00002	4.26
1B	:: tPt-3136	9.1	5	0.00253	3.40
1B	:: wPt-4129	6.8	4	0.00909	2.46
1B	:: wPt-2526	6.9	4	0.00871	2.49
1B	:: wPt-2751	7.9	4	0.00491	-2.59
1B	:: wPt-0260	10.8	6	0.00101	-3.08
1B	:: wPt-7350	11.8	6	0.00060	-3.20
1B	:: wPt3921	21.9	11	0.00000	-4.24
1B	:: wPt8262	17.9	9	0.00002	-4.00
1B	:: wPt1313	22.8	11	0.00000	-4.30
1B	:: wPt-5801	23.7	12	0.00000	-4.50
1B	:: wPt-2575	22.4	11	0.00000	-4.39
1B	:: tPt-1772	24.6	12	0.00000	-4.50
1B	:: wPt-8949	13.2	7	0.00028	-3.46
1B	:: wPt8892	12.4	6	0.00042	-3.24
1B	:: wPt1888	20.4	10	0.00001	-4.18
1B	:: wPt8856	17.4	9	0.00003	-3.84
1B	:: wPt5390	17.3	9	0.00003	-3.79
1B	:: wPt8079	24.4	13	0.00000	-4.47
2A	:: wPt-2087	14.3	7	0.00016	-3.44
2A	:: wPt-2185	15.5	8	0.00008	-3.56
2A	:: wPt-3976	18.8	9	0.00001	-4.02
2A	:: wPt-4533	17.1	9	0.00004	-3.73
2A	:: wPt-2448	18.8	9	0.00001	-4.03
2A	:: wPt4886	10.2	5	0.00139	-3.03
2A	:: rPt7889	17.9	9	0.00002	-3.94
2A	:: wPt6014	18.3	9	0.00002	-3.99
2A	:: wPt-1722	10.9	6	0.00097	-3.03
2A	:: wPt0696	9.7	5	0.00182	-2.96

2B	:: wPt-5788	13.3	7	0.00027	3.91
2B	:: wPt-5513	17.5	9	0.00003	4.46
2B	:: wPt-9336	8.2	4	0.00417	-2.67
2B	:: wPt0459	8.6	4	0.00327	-2.76
2B	:: wPt1294	7.7	4	0.00551	-2.78
2B	:: wPt-6805	7.1	4	0.00766	-2.64
2B	:: wPt-0100	9.9	5	0.00165	-3.14
2B	:: wPt7343	14.5	7	0.00014	-3.73
2B	:: wPt7784	10.2	5	0.00142	-3.20
2B	:: wPt-3388	12.4	6	0.00043	-3.59
2B	:: wPt-7970	8.9	5	0.00284	-3.18
3A	:: tPt6495	7.3	4	0.00703	-2.63
3B	:: wPt-7984	31.0	15	0.00000	-4.98
3B	:: wPt3424	32.6	16	0.00000	-5.17
3B	:: tPt9048	32.0	16	0.00000	-5.23
3B	:: wPt-3609	32.2	16	0.00000	-5.25
3B	:: wPt0002	32.8	16	0.00000	-5.29
3B	:: wPt8266	10.3	5	0.00133	-3.15
3B	:: wPt4773	9.4	5	0.00215	-2.99
3B	:: wPt-6066	50.0	23	0.00000	-6.34
3B	:: rPt-5853	49.5	23	0.00000	-6.29
3B	:: tPt-8143	45.8	21	0.00000	-6.23
3B	:: tPt-9273	42.4	20	0.00000	-5.85
3B	:: wPt4900	11.6	6	0.00066	-3.24
3B	:: wPt-9579	9.4	5	0.00219	-2.85
3B	:: wPt-6216	8.6	4	0.00344	-2.71
3B	:: wPt-2936	7.8	4	0.00522	-2.75
3B	:: wPt-6467	7.7	4	0.00558	-2.60
3B	:: wPt-8559	12.0	6	0.00052	-3.27
3B	:: wPt-4194	13.2	7	0.00029	-3.40
3B	:: tPt-1093	13.2	7	0.00028	-3.37
3B	:: wPt-5947	13.3	7	0.00026	-3.39
3B	:: wPt-0021	15.3	8	0.00009	-3.58
3B	:: wPt-8752	14.7	8	0.00013	-3.51
3B	:: wPt-3638	16.1	8	0.00006	-3.81
4A	:: wPt2938	8.1	4	0.00445	2.95
4A	:: wPt-2777	7.2	4	0.00714	2.53
4A	:: wPt-7280	7.2	4	0.00721	2.51
4A	:: wPt8153	6.7	3	0.00987	-2.38
4A	:: wPt5385	6.8	3	0.00935	-2.45
4A	:: wPt-9418	10.0	5	0.00160	-2.90
4A	:: wPt-4424	8.4	4	0.00377	-2.79
4A	:: wPt-1155	9.8	5	0.00172	-2.89
4A	:: wPt8040	9.1	5	0.00262	2.81
4B	:: wPt-3804	10.2	5	0.00138	-4.18
4B	:: wPt3094	11.1	6	0.00086	-4.21
4B	:: wPt8144	12.2	6	0.00048	-5.62
4B	:: wPt-2077	16.1	8	0.00006	-3.98
4B	:: tPt-2163	58.6	27	0.00000	-6.97
4B	:: tPt-5342	49.8	23	0.00000	-7.60

4B	:: wPt-5497	12.7	6	0.00037	-3.25
4B	:: wPt-6123	12.7	6	0.00037	-3.25
4B	:: wPt-5334	11.3	6	0.00079	-3.09
4B	:: wPt3978	13.4	7	0.00025	-3.40
4B	:: wPt7108	23.8	12	0.00000	-4.50
4B	:: wPt-1708	13.2	7	0.00029	-3.38
5A	:: wPt-4553	16.7	9	0.00004	3.79
5A	:: wPt-0961	20.8	11	0.00001	4.34
5A	:: tPt4602	13.7	7	0.00021	3.57
5A	:: wPt-9887	12.8	7	0.00034	3.72
5A	:: wPt-1165	17.1	9	0.00004	4.12
5B	:: tPt7980	17.7	9	0.00003	-4.69
5B	:: wPt-2998	59.8	27	0.00000	-7.76
5B	:: wPt-2548	64.9	29	0.00000	-7.32
5B	:: wPt8417	6.8	4	0.00891	-2.50
5B	:: wPt3744	7.1	4	0.00785	-2.58
5B	:: wPt-4248	40.0	19	0.00000	-5.76
5B	:: wPt-1261	51.3	24	0.00000	-6.21
5B	:: wPt-3931	49.9	23	0.00000	-6.31
5B	:: wPt-8623	66.1	29	0.00000	-7.34
5B	:: wPt-5416	63.5	28	0.00000	-7.23
5B	:: wPt-9273	42.5	20	0.00000	-7.19
5B	:: wPt-4327	56.6	26	0.00000	-6.71
5B	:: wPt-5093	56.2	26	0.00000	-6.67
5B	:: wPt-9820	57.1	26	0.00000	-6.67
5B	:: wPt-1496	63.2	28	0.00000	-6.95
5B	:: wPt-7476	61.4	28	0.00000	-6.85
5B	:: wPt-8038	61.3	28	0.00000	-6.88
6B	:: tPt-3506	15.2	8	0.00010	-3.79
6B	:: wPt0797	12.2	6	0.00047	-3.21
6B	:: wPt8744	11.7	6	0.00064	-3.12
6B	:: wPt-5408	9.0	5	0.00266	-2.78
6B	:: wPt-3581	7.4	4	0.00636	-2.55
6B	:: wPt-1730	15.3	8	0.00009	-3.71
6B	:: wPt-1762	8.6	4	0.00328	-2.89
6B	:: wPt-9952	8.3	4	0.00390	-2.74
6B	:: wPt-9256	14.9	8	0.00012	-3.64
6B	:: wPt-4164	12.3	6	0.00046	-3.26
6B	:: wPt7339	12.5	6	0.00041	-3.29
6B	:: wPt7757	14.2	7	0.00016	-3.50
7A	:: wPt-4877	12.2	6	0.00049	3.27
7A	:: wPt-4721	14.4	7	0.00015	3.62
7A	:: wPt-6217	11.0	6	0.00093	3.08
7B	:: wPt-3107	19.7	10	0.00001	-4.02
7B	:: wPt-5906	19.6	10	0.00001	-4.04
7B	:: wPt-8096	25.8	13	0.00000	-4.78
7B	:: t4246	14.6	7	0.00014	-3.46
7B	:: wPt8155	15.9	8	0.00007	-3.67
7B	:: wPt7577	27.8	14	0.00000	-4.75
7B	:: wPt8555	25.8	13	0.00000	-4.65

7B	:: rPt0996	20.9	10	0.00000	-4.35
7B	:: wPt-5769	25.2	12	0.00000	-4.55
7B	:: wPt-7186	25.7	13	0.00000	-4.67
7B	:: wPt7318	7.6	4	0.00582	-2.61
7B	:: wPt2847	12.4	6	0.00044	-3.32
7B	:: wPt-0504	9.9	5	0.00163	-2.94
7B	:: tPt-3700	12.5	6	0.00041	-3.23
7B	:: tPt-8504	12.3	6	0.00045	-3.22
7B	:: wPt-7113	9.4	5	0.00213	-2.86
7B	:: wPt1770	11.5	6	0.00069	-3.11
7B	:: wPt3729	8.2	4	0.00422	-2.74
7B	:: wPt6274	18.4	9	0.00002	-4.05
7B	:: wPt-0600	27.3	13	0.00000	-4.69
7B	:: rPt7068	9.1	5	0.00250	3.08
7B	:: wPt6223	9.7	5	0.00187	3.17
7B	:: wPt0128	9.5	5	0.00202	3.13
7B	:: wPt-6690	7.2	4	0.00743	2.56

	B0X 8,9	cf61	1D	B	B	B	•••••	B	B	•••••	B	B	B	•••••	B	B	B
	Box 10,1	cf83	1D	B	B	B	B	B	B	B	B	B	B	B	B	B	B
	B0X 8,9	cf83	1D	B	B	B	B	B	B	B	B	B	A	B	B	B	B
1D allele	B0X 8,9	gwm515	1D	B	B	•••••	B	B	A	B	B	B	B	•••••	B	B	•••••
		%1D	A	0	0	0	0	0	2	1	0	0	0	2	0	0	0
			B	7	7	6	6	6	5	6	6	6	7	7	4	6	7
			•••••	0	0	1	1	1	0	0	1	1	0	0	1	1	0

B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	B	B	B	B	B	B	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	B
B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	B	B
B	B	B	A	B	B	A	B	B	B	B	B	A	A	A	B	B	B	B	A	B			
0	0	0	1	1	1	0	1	0	0	0	0	0	0	5	4	1	0	0	0	1	1	0	
6	7	7	6	5	6	6	6	7	6	6	6	5	6	2	2	5	7	7	6	6	6	7	
1	0	0	0	1	0	1	0	0	1	1	1	2	1	0	1	1	0	0	1	0	0	0	

		B	B	B		B	B		B	B	B	B	B	B		B	B	B		B	B		
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B		B	B	B	B	B	A	A	
B	B	A	B	B	B	B	B	B	B	B	B	B	B	B		B	B	A	B	B	B	B	
B	B	B	A	B	B	B	B	B	B	B		B		A		B	B		B	B	A		
0	0	3	1	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	3	0	0	3	1
5	6	4	6	7	6	7	7	6	6	7	6	7	6	4	6	5	5	7	3	7	6	4	5
2	1	0	0	0	1	0	0	1	1	0	1	0	1	0	1	2	1	0	1	0	1	0	1

110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131
2/49N 25-6	2/49N 2-11	2/49N 2-11	2/49N 1-6	2/49N 1-6	2/49N 21-2	2/49N 31-6	2/49N 19-3	2/49N 19-3	2/49N 19-3	2/49N 19-3	2/49N 1-1	2/49N 22-3	2/49N 2-8	2/49N 12-7	2/49N 1-3	2/49N 1-3	2/49N 3-10	2/49N 3-10	2/49N 12-6	2/49N 12-6	2/49N 29-6
B	A	B		B	B	A	B	B	B	A	A	A	B	B	B	A	A	A	B		B
	A	B			B	A	B	B	B	B	A	A	B	B	B	A	A	A	A	A	A
B	B			B		A	H	A	B	B	A	B	B	B	B	B	B	H		H	
	B	B			B		B	A	B		B	A		A	B	B	A		B		B
B	B			B	A	B		B	B	B		A	A	B		A	A	A	B		A
B	B	B	H	A	B		B		B	B	H	A	A	H	H	A	A	A	B		A
	B				B					B		B	A	A			A	A	A	B	A
	B				B		B			B		B	A	A			A	A	A	B	A
B	B	B	A	A	B	B	A	A	A	A	B	A	B	B	B		A	B	A	H	A
B	B	B	A	H	B	A	B		B	H	B	A	B	B	B	A	A		B		
B	B	B	A	A	B		A		A	A	B	A	B	B	B	A	A	B	A	H	A
B	B	B	B	H	A	A	B		B		B	A	A	B	B	A	A	A		H	A
					B		B	B	B	B	B	B	A	B	B		B	A	A	B	B
B	B	B	B	B		B	B	B	B		B		B		B		B	B	B	B	A
B	B	B	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	B	A
B	B	B	B	B	B	B	B	A	B	B	B	B	B	A	B	B	A	B	A	A	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	B
	B	B	B		B	B	B	A	B	A	A	B	B	B	A	B	A	B	A		A

22	23	123	172	97	98	99	100	20	49	89	90	16	17	140	159	21	50	78	131	38	96
2/49N 2-8	2/49N 2-8	2/49N 2-8	2/49N 2-8	2/49N 29-1	2/49N 29-1	2/49N 29-1	2/49N 29-1	2/49N 29-13	2/49N 29-13	2/49N 29-13	2/49N 29-13	2/49N 29-3	2/49N 29-3	2/49N 29-3	2/49N 29-3	2/49N 29-6	2/49N 29-6	2/49N 29-6	2/49N 29-6	2/49N 3-10	2/49N 3-10
A	A	B	B	B	H	B		A	B			B	A	A	A	B	A	A	B	A	B
A	H		B	B	A	A	A	A	A			B	A	A	A	A	H		A	A	
A	H	B		B	H	H	H	A		B	B	B	A	A	A	A	H	H	A	A	B
	B	B																			
A	A			A	A	A	A	B	B			B		B	B	B	B	B	B		
A	H	A	A	A	A	A	A	H	A	A	A	H	A	A		H	H	A	A	A	A
H	H	A	H	H	H	H	A		A	B	H	B	A	B	B	H	B	A	A	A	A
A		A	A	A	A	A	A	A	B			B					H	B			A
A		A	A	A	A	A	A	B	B	B	B	B	B	B	B		A	B			A
B	B	B	B	A	A		A	A	A	B									A	B	A
A	A	A	A	A	B			B	B	B	B	B	A		B		B	A		A	A
A	A	B	B	A	A		A				B		B		A	A	B	A	H	A	A
A	A	A	A		A			A	A	B	B	H	A	A	B	A	B	B	A	A	A
B	B	A	B		A		B		B	B		B			B	B	B	B	B	A	A
B							A		B	B	A	B		B	B		B	B	A	B	B
B	B	B	B	A	A	A	A	A	A	B	B	A	A	A	A	B	A	B	A	B	B
B	B	B	B	A	A	A	B	B	B	B	B	B	A	A	A	A	A	B	B	B	B
B	B	B	B	A	A	B	B	B	B	B	B	A	A	A	A	B	A	B	A	B	B

B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	A	A	A	B	B	B	A	B	B	B	A	B	A	A	B	B
B	B	B	B	A	A	A	B	B	B	A	B	B	A	A	A	A	A	B	B	B	B
B	B	B	B	A	A	A	A	A	A	A	B	A	A	A	B	A	A	A	B	B	B
0	0	0	0	5	5	5	3	3	2	1	0	3	5	5	5	3	5	1	4	0	0
7	7	7	5	2	2	2	4	4	5	5	7	3	2	1	1	4	2	5	3	7	6
0	0	0	2	0	0	0	0	0	0	1	0	1	0	1	1	0	0	1	0	0	1

B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
B	B	B	B	A	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	
A	B	B	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	A	B	A	
2	0	0	1	2	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	2	
5	7	7	6	5	6	6	5	7	7	7	6	6	6	7	7	6	6	6	5	5	4
0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	1	1	1	1	1	1

B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
B	B	B	B	B	B	B	B	B	B	B	B	A	B	B	B	B	A	B	A	B	B	B
0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	2	0	0	
7	6	7	7	6	7	5	6	6	6	7	6	7	6	7	6	7	7	6	6	5	6	
0	1	0	0	1	0	1	1	1	1	0	1	0	0	0	1	0	0	0	1	0	1	

176	177	178	179	180	181	182	183	184	sumA	sumB	sumH	sum-	%A	%B	%H	%-
A	A	B	A	H	A	A	A	A	73	65	16	30	40	35	9	16
A	H	H	A	A	A	A	A	A	71	56	14	43	39	30	8	23
A	A	B	A	H	A	A	A	A	52	63	28	41	28	34	15	22
B	B	B	A	A	A	H	B	A	30	67	19	68	16	36	10	37
B	B	B	B	B	B	A	A	A	43	68	0	73	23	37	0	40
A	A	B	A	A	A	A	A	A	77	64	14	28	42	35	8	15
A	A	H	A	A	A	A	A	A	61	64	31	28	33	35	17	15
A	B	B	B	B	B	B	A	B	39	49	2	94	21	27	1	51
B	B	B	B	B	B	B	A	B	40	73	0	71	22	40	0	39
B	B	B	A	B	B	B	A	B	52	100	24	8	28	54	13	4
A	A	B	B	B	B	B	B	A	49	91	9	34	27	49	5	18
B	B	B	A	A	H	A	B	A	77	68	8	31	42	37	4	17
A	A	H	A	B	B	B	B	A	85	60	15	23	46	33	8	13
B	H	A	A	B	B	B	A	A	55	77	2	49	30	42	1	27
B	B	B	A	B	A	A	A	B	30	96	1	57	16	52	1	31
B	B	B	B	B	B	B	B	B	30	154	0	0	16	84	0	0
B	B	B	B	B	B	B	B	B	23	160	0	1	13	87	0	1
B	B	B	B	B	B	B	B	B	12	170	0	2	7	92	0	1
B	B	B	A	B	B	B	B	B	2	136	0	46	1	74	0	25
B	B	B	A	B	B	B	B	B	14	169	0	1	8	92	0	1
B	B	B	B	B	B	B	B	B	22	162	0	0	12	88	0	0
B	B	B	B	B	B	B	B	B	37	109	0	38	20	59	0	21

85	79	138	165	166	9	10	11	12	sumA	sumB	sumH	sum-	%A	%B	%H	%-
H	A	H	A	A	A	A	A	A	73	65	16	30	40	35	9	16
H	A	B	A	A	A	A	A	A	71	56	14	43	39	30	8	23
H	A	A	H	A	A	A	A	A	52	63	28	41	28	34	15	22
B	B	B	A	A	A	A	A	A	30	67	0	87	16	36	0	47
B	B	B	B	B	A	A	A	A	43	68	0	73	23	37	0	40
H	A	A	A	A	A	A	A	A	78	64	14	28	42	35	8	15
B	A	A	A	A	H	H	A	A	61	64	31	28	33	35	17	15
A	B	B	B	B	A	A	A	A	39	49	2	94	21	27	1	51
A	B	B	B	B	A	A	A	A	40	73	0	71	22	40	0	39
A	A	A	A	A	A	A	A	A	52	100	0	32	28	54	0	17
A	B	B	B	B	B	B	B	B	50	91	9	34	27	49	5	18
A	A	A	A	A	A	A	A	H	77	68	8	31	42	37	4	17
B	B	B	B	B	A	B	B	A	86	60	15	23	47	33	8	13
B	A	A	A	A	A	A	A	B	55	77	2	49	30	42	1	27
B	A	A	A	A	A	A	A	A	30	96	1	57	16	52	1	31
B	B	B	B	B	A	B	A	B	30	154	0	0	16	84	0	0
B	B	A	B	B	B	B	B	B	23	160	0	1	13	87	0	1
B	B	B	B	B	B	B	B	B	12	170	0	2	7	92	0	1

B	B	B	A	B	B	B	B	2	136	0	46	1	74	0	25
A	B	B	A	B	B	B	B	14	169	0	1	8	92	0	1
B	B	A	B	B	A	B	B	22	162	0	0	12	88	0	0
A	A	B	B	B	B	A	B	37	109	0	38	20	59	0	21
2	1	2	1	0	2	0	2	0							
5	6	4	5	6	5	7	5	7							
0	0	1	1	1	0	0	0	0							
