TERRA REF project, Maricopa Arizona, 2016	
Data Use Policy https://terraref.gitbooks.io/terraref-documentation/content/user/data_release_policy.html	
2016 sorghum experiments, total experimental size 32 rows x 216 m.	
Row width 76.2 cm. Plot size = (4 m including 0.5 m alley) x 2 rows.	
Total of 864 plots = 16 columns (of two rows) x 54 ranges.	
Project:	TERRA REF project of the TERRA program (Transportation Energy Resources from Renewable Agriculture). A Reference Phenotyping System for Energy Sorghum, field scanner system in Maricopa, Arizona.
Introduction:	This document contains and describes manually recorded data that supplements and ground-truths associated data recorded from sensors in the field scanner system. Also included are protocols and field activities related to the crop.
Explanation of the sheets:	Definitions, comments (that inform the field data), experimental plot plans and the field map are each contained in separate sheets. Subsequent sheets are data from manual measurements, each sheet representing data collected individual 'missions' which are associated with specific objectives.
Definitions	Defines all variables for each sheet
Comments	Provides annotations for problems with specific plots, etc.
Plot_plan	Schematic map of the field showing treatments and plot numbers
Formatting notes:	Sheet names use underscores (_) to prevent read problems with some software
	Use of high-lighting or special characters, pull-down lists, etc. is strongly discouraged except for temporarily flagging problem cells.
	Calculations and macros are not used.

	Entry Number [Bord = border, variety Ton-A-Milk]																	↑North
Range																	Var	
2-row	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
4-row		Plot 1		Plot 2		Plot 3		Plot 4		Plot 5		Plot 6		Plot 7			Rep	Expt
54	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord		
53	Bord	Bord	Bord	173	173	173	173	173	173	173	173	173	173	Bord	Bord	Bord		
52	Bord	22	22	77	77	51	51	123	123	134	134	26	26	41	41	Bord	2	
51	Bord	61	61	166	166	2	2	36	36	92	92	63	63	98	98	Bord	2	
50	Bord	153	153	170	170	53	53	90	90	152	152	5	5	84	84	Bord	2	
49	Bord	23	23	1	1	10	10	132	132	116	116	107	107	130	130	Bord	2	
48	Bord	40	40	57	57	88	88	3	3	167	167	171	171	17	17	Bord	2	
47	Bord	7	7	163	163	62	62	142	142	129	129	25	25	118	118	Bord	2	
46	Bord	12	12	39	39	133	133	168	168	14	14	66	66	139	139	Bord	2	
45	Bord	104	104	19	19	65	65	60	60	154	154	20	20	79	79	Bord	2	
44	Bord	45	45	156	156	29	29	121	121	81	81	151	151	112	112	Bord	2	
43	Bord	78	78	103	103	72	72	125	125	75	75	37	37	80	80	Bord	2	
42	Bord	115	115	138	138	149	149	147	147	27	27	15	15	13	13	Bord	2	
41	Bord	52	52	159	159	140	140	137	137	97	97	28	28	49	49	Bord	2	
40	Bord	131	131	58	58	21	21	157	157	150	150	86	86	67	67	Bord	2	Stay-green RILs F10
39	Bord	106	106	135	135	56	56	8	8	32	32	169	169	30	30	Bord	2	
38	Bord	146	146	83	83	122	122	50	50	173	173	165	165	99	99	Bord	2	
37	Bord	38	38	144	144	127	127	85	85	124	124	44	44	111	111	Bord	2	
36	Bord	54	54	113	113	4	4	136	136	126	126	42	42	145	145	Bord	2	
35	Bord	91	91	59	59	70	70	89	89	18	18	148	148	11	11	Bord	2	
34	Bord	161	161	110	110	87	87	109	109	102	102	31	31	114	114	Bord	2	
33	Bord	34	34	82	82	46	46	68	68	96	96	143	143	35	35	Bord	2	
32	Bord	141	141	164	164	48	48	64	64	155	155	174	174	16	16	Bord	2	
31	Bord	24	24	101	101	160	160	74	74	9	9	162	162	119	119	Bord	2	
30	Bord	47	47	100	100	6	6	117	117	105	105	73	73	71	71	Bord	2	
29	Bord	95	95	120	120	55	55	128	128	158	158	94	94	33	33	Bord	2	
28	Bord	43	43	175	175	69	69	172	172	108	108	76	76	93	93	Bord	2	
27	Bord	65	65	34	34	99	99	81	81	161	161	28	28	160	160	Bord	1	
26	Bord	14	14	42	42	17	17	50	50	97	97	13	13	144	144	Bord	1	
25	Bord	75	75	147	147	85	85	157	157	143	143	114	114	77	77	Bord	1	
24	Bord	79	79	118	118	55	55	111	111	132	132	134	134	119	119	Bord	1	
23	Bord	93	93	38	38	64	64	2	2	39	39	24	24	131	131	Bord	1	
22	Bord	76	76	10	10	78	78	54	54	30	30	122	122	109	109	Bord	1	
21	Bord	29	29	168	168	68	68	36	36	128	128	5	5	116	116	Bord	1	
20	Bord	164	164	142	142	46	46	126	126	107	107	159	159	73	73	Bord	1	
19	Bord	83	83	100	100	112	112	150	150	167	167	1	1	51	51	Bord	1	
18	Bord	8	8	9	9	16	16	149	149	152	152	88	88	130	130	Bord	1	
17	Bord	139	139	11	11	57	57	72	72	74	74	47	47	163	163	Bord	1	
16	Bord	106	106	140	140	129	129	67	67	84	84	87	87	133	133	Bord	1	
15	Bord	120	120	148	148	151	151	48	48	40	40	110	110	124	124	Bord	1	Stay-green RILs F10
14	Bord	173	173	70	70	135	135	155	155	20	20	12	12	22	22	Bord	1	
13	Bord	175	175	7	7	59	59	145	145	156	156	123	123	115	115	Bord	1	
12	Bord	108	108	66	66	71	71	27	27	94	94	154	154	31	31	Bord	1	
11	Bord	171	171	69	69	53	53	95	95	26	26	52	52	37	37	Bord	1	
10	Bord	35	35	105	105	91	91	127	127	172	172	165	165	90	90	Bord	1	
9	Bord	141	141	25	25	103	103	98	98	33	33	146	146	15	15	Bord	1	
8	Bord	162	162	96	96	158	158	56	56	86	86	113	113	89	89	Bord	1	
7	Bord	62	62	32	32	3	3	104	104	166	166	82	82	43	43	Bord	1	
6	Bord	92	92	137	137	44	44	6	6	80	80	121	121	169	169	Bord	1	
5	Bord	18	18	138	138	63	63	58	58	19	19	23	23	49	49	Bord	1	
4	Bord	4	4	41	41	117	117	101	101	61	61	170	170	102	102	Bord	1	

		3	Bord	45	45	136	136	174	174	125	125	153	153	60	60	21	21	Bord	1	
		2	Bord	Bord	Bord	173	173	173	173	173	173	173	173	173	173	Bord	Bord	Bord	1	
		1	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	Bord	1	

Sheet	Term	Description	Unit_type_notes	
	Experiments:	7 experiments designed within the scanner system field during the sorghum first-year planting.		
	BAP	Biomass Association Panel, 3 reps, 30 lines (12 PS, 12 sweet, 6 grain), RCB with sorghum types nested in groups		
	Night illumination	3 reps, 5 illumination levels x 2 PS lines (with check line separating illumination levels), RCB		
	Row #	3 reps, 6 adjacent plot scenarios: 3 lines (forage, sweet, PS) x 2 sides (east or west), RCB but not balanced with all treatments in all reps		
	Biomass	3 reps, 5 sampling times x 3 lines (forage, sweet, PS), RCB with sampling time as a repeated measure		
	Density	3 reps, 3 densities (5, 15, 30 cm) x 3 lines (forage, sweet, PS), RCB		
	RILs	3 reps, 130 RILs plus 10 repeats of a single line/rep, Incomplete Block (row-column alpha lattice design)		
	Uniformity	17 reps, 2 lines (forage, PS), No experimental design - Same line planted in single range		
	Range:	54 ranges that run in the East-West direction, 4 m length per range (=3.5 m planted plus 0.5 m alley)		
	Stand count:	Manual counts of all emerged plants with visible coleoptile, by row within plots.		
		PI=photoperiod insensitive, PS=photoperiod sensitive, MPS= moderately photoperiod sensitive		
Plot_plan	Range			
	Column			
	Entry number			
	Plot number			
Field_map_by_entry	Entry			
	Code			
	Source			
	Common name			
	Pedigree			
	Pedigree2			
	Seed color	R=red, W=white, Bn=brown		
	Plant color	T=tan, P=pigmented, TP=segregating		
	Ht	Plant height		
	Maturity group (e=early, m=medium, l=late)	e=early, m=medium, l=late		
	Maturity response	PI=photoperiod insensitive, PS=photoperiod sensitive, MPS= moderately photoperiod sensitive		
Emergence_StandCounts_BAP	Experiment	7 experiments designed within the scanner system field during the sorghum first-year planting.		
	Range			
	Column			
	Row			
	Plot			
	Entry			
	Rep			
	Type			
	PI			
	Common_name			
	StndCount_Apr_26_2016	Plants emerged within an entire plot row on 2016-04-26		
	StndCount_Apr_27_2016			
	StndCount_Apr_29_2016			
	StndCount_May_2_2016			
PlantHeights_AllPlots	Plant_Ht_Date_cm	Canopy height for single row of central 2 data rows of 4-row plot. Measured in cm using meter stick, taken at the height representing the plot 'potential', ignoring stunted plants. The canopy height was measured as the height of the foliage (not the inflorescence) at the general top of the canopy where the upper leaves bend and/or establish a canopy surface that would support a very light horizontal object (imagining a light sheet of rigid plastic foam), discounting rare or exceptional leaves in the upper-most 2 or 3 percentile.	cm	
	Panicle_Ht_Date_cm	Height of the top of the inflorescence panicle for single central data row of 4-row plot, when panicle extends notably above canopy height.	cm	

rep	D_small_block	Range	D_row	two_ROW_PLOT_NUMBER	MAC_ENTRY	West/East_subplot_Data_Row	TAM_Entry	TAM_Code	TAM_Source1	TAM_Source2	TAM_Pedigree	Genotype	Sd	Pl	Plot_status_PlantRemoval	Plant_ht_Aug24_cm	Plant_ht_Aug31_cm	comments	Plant_ht_Sep8_cm	comments_Sep8	Plant_ht_Sep15_cm	comments_Sep15	Plant_ht_Sep22_cm	Panicle_ht_Sep22_cm	comments	Plant_ht_Sep29_cm	Panicle_ht_Sep29_cm	comments
v	v	1		1	border		v	v	v	v	v	border	v	v														
		1	1	2	border							border																
		1	1	3	border							border																
		1	2	4	border							border																
		1	2	5	border							border																
		1	3	6	border							border																
		1	3	7	border							border																
		1	4	8	border							border																
		1	4	9	border							border																
		1	5	10	border							border																
		1	5	11	border							border																
		1	6	12	border							border																
		1	6	13	border							border																
		1	7	14	border							border																
		1	7	15	border							border																
		1		16	border							border																
		2		1	border							border																
		2	1	2	border	W						border				12	27		53		83		115			130		
		2	1	3	border	E						border				9	20		46		66		100			126		
		2	2	4	173	W						Great Scott				14	29		58		74		102			127		
		2	2	5	173	E						Great Scott				18	36		60		78		97			126		
		2	3	6	173	W						Great Scott				14	24		50		66		87			121		
		2	3	7	173	E						Great Scott				13	33		48		68		85			121		
		2	4	8	173	W						Great Scott				15	30		49		69		89			114		
		2	4	9	173	E						Great Scott				14	29		54		71		95			115		
		2	5	10	173	W						Great Scott				13	31		50		67		93			115		
		2	5	11	173	E						Great Scott				16	35		56		68		107			120		
		2	6	12	173	W						Great Scott				16	33		51		69		95			118		
		2	6	13	173	E						Great Scott				21	38		54		82		101			119		
		2	7	14	border	W						border				16	29		50		73		112			128		
		2	7	15	border	E						border				13	25		44		67		104			124		
		2		16	border							border																
		3		1	border							border																
1	1	3	1	2	45	W	55	1	09CS7488	09CS7488	(SC56*TX7000)-F:	RIL_55	R	P		16	32		46		65		71			71		
1	1	3	1	3	45	E	55	1	09CS7488	09CS7488	(SC56*TX7000)-F:	RIL_55	R	P		12	26		43		64		71			71		
1	1	3	2	4	136	W	150	3	09CS7583	10CS10906	(SC56*TX7000)-F:	RIL_150	R	P	Sep21 off-type plants removed	17	33		51		60/94		69			73		
1	1	3	2	5	136	E	150	3	09CS7583	10CS10906	(SC56*TX7000)-F:	RIL_150	R	P	Sep21 off-type plants removed	16	32		48		56/83		70			68		
1	1	3	3	6	174	W					TX7000	TX7000				14	30		50		68		68			74		
1	1	3	3	7	174	E					TX7000	Tx7000				15	32		48		72		73			72		
1	1	3	4	8	125	W	138	1	09CS7571	09CS7571	(SC56*TX7000)-F:	RIL_138	RW	P		10	22		37		53		67			68		
1	1	3	4	9	125	E	138	1	09CS7571	09CS7571	(SC56*TX7000)-F:	RIL_138	RW	P		13	30		45		54		70			67		
1	1	3	5	10	153	W	169	1	09CS7602	09CS7602	(SC56*TX7000)-F:	RIL_169	RW	P		15	28		46		64		73			75		
1	1	3	5	11	153	E	169	1	09CS7602	09CS7602	(SC56*TX7000)-F:	RIL_169	RW	P		15	24		47		65		79			76		
1	1	3	6	12	60	W	72	1	09CS7505	09CS7505	(SC56*TX7000)-F:	RIL_72	R	P		13	27		45		57		71			77		
1	1	3	6	13	60	E	72	1	09CS7505	09CS7505	(SC56*TX7000)-F:	RIL_72	R	P		12	29		41		56		76			75		
1	1	3	7	14	21	W	28	1	09CS7461	09CS7461	(SC56*TX7000)-F:	RIL_28	R	P		14	30		53		63		78			74		
1	1	3	7	15	21	E	28	1	09CS7461	09CS7461	(SC56*TX7000)-F:	RIL_28	R	P		14	26		46		62		80			76		
9		3		16	border							border																
9		4		1	border							border																
1	2	4	1	2	4	W	9	3	09CS7442	10CS10756	(SC56*TX7000)-F:	RIL_9	W	P	Sep21 single off-type plant removed	15	30		50		67		91			85		
1	2	4	1	3	4	E	9	3	09CS7442	10CS10756	(SC56*TX7000)-F:	RIL_9	W	P	Sep21 single off-type plant removed	15	32		50		72		90			86		
1	2	4	2	4	41	W	50	1	09CS7483	09CS7483	(SC56*TX7000)-F:	RIL_50	W	P		13	29		48		66		80			75		
1	2	4	2	5	41	E	50	1	09CS7483	09CS7483	(SC56*TX7000)-F:	RIL_50	W	P		14	27		47		65		82			79		
1	2	4	3	6	117	W	129	3	09CS7562	09CS7562	(SC56*TX7000)-F:	RIL_129	R	P	Sep21 off-type plants removed	16	40		55		70/95		74			76		
1	2	4	3	7	117	E	129	3	09CS7562	09CS7562	(SC56*TX7000)-F:	RIL_129	R	P	Sep21 off-type plants removed	15	35		56		74/109		75			74		
1	2	4	4	8	101	W	113	3	09CS7546	10CS10868	(SC56*TX7000)-F:	RIL_113	W	P	Sep21 off-type plants removed	11	22		43		62/94		72			73		
1	2	4	4	9	101	E	113	3	09CS7546	10CS10868	(SC56*TX7000)-F:	RIL_113	W	P	Sep21 off-type plants removed	9	18		36		58/111		65			78		
1	2	4	5	10	61	W	73	1	09CS7506	09CS7506	(SC56*TX7000)-F:	RIL_73	R	P		14	30		43		68		80			79		
1	2	4	5	11	61	E	73	1	09CS7506	09CS7506	(SC56*TX7000)-F:	RIL_73	R	P		15	31		48		73		86			84		
1	2	4	6	12	170	W	188	1	09CS7621	09CS7621	(SC56*TX7000)-F:	RIL_188	W	P		15	31		52		73		75			72	95	
1	2	4	6	13	170	E	188	1	09CS7621	09CS7621	(SC56*TX7000)-F:	RIL_188	W	P		14	28		45		63		71			70	96	
1	2	4	7	14	102	W	114	1	09CS7547	09CS7547	(SC56*TX7000)-F:	RIL_114	W	P		16	35		49		59		64	79		71	97	
1	2	4	7	15	102	E	114	1	09CS7547	09CS7547	(SC56*TX7000)-F:	RIL_114	W	P		17	33		49		60		61	72		74	96	
		4		16	border							border																
		5		1	border							border																
1	3	5	1	2	18	W	25	1	09CS7458	09CS7458	(SC56*TX7000)-F:	RIL_25	R	P		11	25		38		62		65			68	75	
1	3	5	1	3	18	E	25	1	09CS7458	09CS7458	(SC56*TX7000)-F:	RIL_25	R	P		12	23		47		59		64			64	80	
1	3	5	2	4	138	W	152	1	09CS7585	09CS7585	(SC56*TX7000)-F:	RIL_152	W	P		18	34		52		69		74	102		76	111	
1	3	5	2	5	138	E	152	1	09CS7585	09CS7585	(SC56*TX7000)-F:	RIL_152	W	P		17	33		50		63		72	92		75	109	
1	3	5	3	6	63	W	75	1	09CS7508	09CS7508	(SC56*TX7000)-F:	RIL_75	R	P		17	35		57		70		77			80	103	
1	3	5	3	7	63	E	75	1	09CS7508	09CS7508	(SC56*TX7000)-F:	RIL_75	R	P		17	36		58		68		75			82	98	
1	3	5	4	8	58	W	70	3	09CS7503	09CS7503	(SC56*TX7000)-F:	RIL_70	W	P	Sep21 single off-type plant removed	8	23		45		56		68			65	91	
1	3	5	4	9	58	E	70	3	09CS7503	09CS7503	(SC56*TX7000)-F:	RIL_70	W	P	Sep21 single off-type plant removed	18	33	variable	55		57/75		74			69	81	
1	3	5	5	10	19	W	26	1	09CS7459	09CS7459	(SC56*TX7000)-F:	RIL_26	W	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	15	26		42		53		55			53	70	
1	3	5	5	11	19	E	26	1	09CS7459	09CS7459	(SC56*TX7000)-F:	RIL_26	W	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	12	27		40		52		56			53	66	
1	3	5	6	12	23	W	30	1	09CS7463	09CS7463	(SC56*TX7000)-F:	RIL_30	W	P		17	38		55		72		82	107		86	134	
1	3	5	6	13	23	E	30	1	09CS7463	09CS7463	(SC56*TX7000)-F:	RIL_30	W	P		19	37		52		66		82	115		88	139	
1	3	5	7	14	49	W	60	1	09CS7493	09CS7493	(SC56*TX7000)-F:	RIL_60	W	P		17	31		43		63		80			78	97	
1	3	5	7	15	49	E	60	1	09CS7493	09CS7493	(SC56*TX7000)-F:	RIL_60	W	P		16	33		44		65		83			73	86	
		5		16	border							border																
		6		1	border							border																
1	4	6	1	2	92	W	104	1	09CS7537	09CS7537	(SC56*TX7000)-F:	RIL_104	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	24		36		63		61			62		
1	4	6	1	3	92	E	104	1	09CS7537	09CS7537	(SC56*TX7000)-F:	RIL_104	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	12	25		42		58		69			65		
1	4	6	2	4	137	W	151	1	09CS7584	09CS7584	(SC56*TX7000)-F:	RIL_151	W	P		14	31		47		71		78			73	88	
1	4	6	2	5	137	E	151	1	09CS7584	09CS7584	(SC56*TX7000)-F:	RIL_151	W	P		16	33		46		68		76			71	91	
1	4	6	3	6	44	W	54	1	09CS7487	09CS7487	(SC56*TX7000)-F:	RIL_54	W	P		15	32		47		64		75			72		
1	4	6	3	7	44	E	54	1	09CS7487	09CS7487	(SC56*TX7000)-F:	RIL_54	W	P		16	34		51		69		72			76		
1	4	6	4	8	6	W	11	3	09CS7444	10CS10758	(SC56*TX7000)-F:	RIL_11	RW	P	Sep21 off-type plants removed	14	31		57		68		84			88		
1	4	6	4	9	6	E	11	3	09CS7444	10CS10758	(SC56*TX7000)-F:	RIL_11	RW	P	Sep21 off-type plants removed	16	29	variable	57		68/118		80/110			83		
1	4	6	5	10	80	W	92	1	09CS7525	09CS7525	(SC56*TX7000)-F:	RIL_92	RW	P		20	40		59		78		88			84		
1	4	6	5	11	80	E	92	1	09CS7525	09CS7525	(SC56*TX7000)-F:	RIL_92	RW	P		19	41		67		81		92			83	104	
1	4	6	6	12	121	W	133	1	09CS7566	09CS7566	(SC56*TX7000)-F:	RIL_133	W	P		18	37		55		74		90			86		
1	4	6	6	13	121	E	133	1	09CS7566	09CS7566	(SC56*TX7000)-F:	RIL_133	W	P		19	34		57		79		84			82	114	
1	4	6	7	14	169	W	187	1	09CS7620	09CS7620	(SC56*TX7000)-F:	RIL_187	W	P		14	30		43		57		69			71	73	
1	4	6	7	15	169	E	187	1	09CS7620	09CS7620	(SC56*TX7000)-F:	RIL_187	W	P		12	25		43		57		67					
		6		16	border							border																
		7		1	border							border																
1	5	7	1	2	62	W	74	1	09CS7507	09CS7507	(SC56*TX7000)-F:	RIL_74	W	P		12	22		35		55		60			66	88	
1	5	7	1	3	62	E	74	1	09CS7507	09CS7507	(SC56*TX7000)-F:	RIL_74	W	P		11	21		34		56		61			64	80	
1	5	7	2	4	32	W	40	1	09CS7473	09CS7473	(SC56*TX7000)-F:	RIL_40	W	P		15	34		56		68		75	90		75	107	
1	5	7	2	5	32	E	40	1	09CS7473	09CS7473	(SC56*TX7000)-F:	RIL_40	W	P		17	35		55		70		74	98		78	107	
1	5	7	3	6	3	W	4	1	10CS10751	10CS10751-1	(SC56*TX7000)-F:	RIL_4	R	P		10	23		41		66		78			78		
1	5	7	3	7	3	E	4	1	10CS10751	10CS10751-1	(SC56*TX7000)-F:	RIL_4	R	P		12	30		46		64		76			75		
1	5	7	4	8	104	W	116	1	09CS7549	09CS7549	(SC56*TX7000)-F:	RIL_116	W	P		14	32		50		77		84			93		
1	5	7	4	9	104	E	116	1	09CS7549	09CS7549	(SC56*TX7000)-F:	RIL_116	W	P		16	37		58		80		92			89	113	
1	5	7	5	10	166	W	183	3	09CS7616	09CS7616	(SC56*TX7000)-F:	RIL_183	W	P	Sep21 off-type plants removed	16	39		64		79/103		90			88		
1	5	7	5	11	166	E	183	3	09CS7616	09CS7616	(SC56*TX7000)-F:	RIL_183	W	P	Sep21 off-type plants removed	17	44		65		77/100		86			86		
1	5	7	6	12	82	W	94	1	09CS7527	09CS7527	(SC56*TX7000)-F:	RIL_94	RW	P		14	27		50		67		73			74	102	
1	5	7	6	13	82	E	94	1	09CS7527	09CS7527	(SC56*TX7000)-F:	RIL_94	RW	P		13	29		49		62		71			72	94	
1	5	7	7	14	43	W	52	1	09CS7485	09CS7485	(SC56*TX7000)-F:	RIL_52	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	12	24		46		54		57			66		
1	5	7	7	15	43	E	52	1	09CS7485	09CS7485	(SC56*TX7000)-F:	RIL_52	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	16	32		47		62		64			67		
		7		16	border							border																
		8		1	border							border																
1	6	8	1	2	162	W	179	1	09CS7612	09CS7612	(SC56*TX7000)-F:	RIL_179	R	P		14	29		46		60		70			70	86	
1	6	8	1	3	162	E	179	1	09CS7612	09CS7612	(SC56*TX7000)-F:	RIL_179	R	P		13	29		48		58		64			67	90	
1	6	8	2	4	96	W	108	1	09CS7541	09CS7541	(SC56*TX7000)-F:	RIL_108	W	P		14	32		53		69		78			88	105	
1	6	8	2	5	96	E	108	1	09CS7541	09CS7541	(SC56*TX7000)-F:	RIL_108	W	P		19	36		54		67		77			82	116	
1	6	8	3	6	158	W	175	3	09CS7608	09CS7608	(SC56*TX7000)-F:	RIL_175	R	P	Sep21 off-type plants removed	17	38		52		76/115		77			70	114	
1	6	8	3	7	158	E	175	3	09CS7608	09CS7608	(SC56*TX7000)-F:	RIL_175	R	P	Sep21 off-type plants removed	12	31		48		75		72			76	95	
1	6	8	4	8	56	W	67	3	09CS7500	10CS10818	(SC56*TX7000)-F:	RIL_67	W	P		16	35		56		75		89			84		
1	6	8	4	9	56	E	67	3	09CS7500	10CS10818	(SC56*TX7000)-F:	RIL_67	W	P		14	31		49		68		89			82		
1	6	8	5	10	86	W	98	1	09CS7531	09CS7531	(SC56*TX7000)-F:	RIL_98	W	P		20	38		60		74		92			87	120	
1	6	8	5	11	86	E	98	1	09CS7531	09CS7531	(SC56*TX7000)-F:	RIL_98	W	P		19	37		57		79		89			85	109	
1	6	8	6	12	113	W	125	1	09CS7558	09CS7558	(SC56*TX7000)-F:	RIL_125	W	P		16	30		55		68		75			74	105	
1	6	8	6	13	113	E	125	1	09CS7558	09CS7558	(SC56*TX7000)-F:	RIL_125	W	P		16	32		51		66		73			77	103	
1	6	8	7	14	89	W	101	3	09CS7534	09CS7534	(SC56*TX7000)-F:	RIL_101	R	P		16	32		54		55/77		74/103			65	93	
1	6	8	7	15	89	E	101	3	09CS7534	09CS7534	(SC56*TX7000)-F:	RIL_101	R	P		15	30		47		56/70		65/97			65	91	
		8		16	border							border																
		9		1	border							border																
1	7	9	1	2	141	W	156	3	09CS7589	10CS10914	(SC56*TX7000)-F:	RIL_156	W	P		17	35		59		77		87			101		
1	7	9	1	3	141	E	156	3	09CS7589	10CS10914	(SC56*TX7000)-F:	RIL_156	W	P		17	34		58		77		86			98		
1	7	9	2	4	25	W	32	1	09CS7465	09CS7465	(SC56*TX7000)-F:	RIL_32	W	P		14	30		52		66		73			81	110	
1	7	9	2	5	25	E	32	1	09CS7465	09CS7465	(SC56*TX7000)-F:	RIL_32	W	P		18	34		57		65		78			85	113	
1	7	9	3	6	103	W	115	1	09CS7548	09CS7548	(SC56*TX7000)-F:	RIL_115	W	P		12	30		49		67		73			71	97	
1	7	9	3	7	103	E	115	1	09CS7548	09CS7548	(SC56*TX7000)-F:	RIL_115	W	P		6	17		34		51		50			64		
1	7	9	4	8	98	W	110	1	09CS7543	09CS7543	(SC56*TX7000)-F:	RIL_110	W	P		15	32		57		70		85			85	109	
1	7	9	4	9	98	E	110	1	09CS7543	09CS7543	(SC56*TX7000)-F:	RIL_110	W	P		15	30		54		66		82			82	114	
1	7	9	5	10	33	W	41	1	09CS7474	09CS7474	(SC56*TX7000)-F:	RIL_41	R	P		14	28		47		62		70			73		
1	7	9	5	11	33	E	41	1	09CS7474	09CS7474	(SC56*TX7000)-F:	RIL_41	R	P		11	26		45		53		63			69		
1	7	9	6	12	146	W	161	1	09CS7594	09CS7594	(SC56*TX7000)-F:	RIL_161	R	P		17	36		60		77		82			79	100	
1	7	9	6	13	146	E	161	1	09CS7594	09CS7594	(SC56*TX7000)-F:	RIL_161	R	P		17	37		53		76		86			77	107	
1	7	9	7	14	15	W	21	1	09CS7454	09CS7454	(SC56*TX7000)-F:	RIL_21	W	P		14	30		42		60		69			74		
1	7	9	7	15	15	E	21	1	09CS7454	09CS7454	(SC56*TX7000)-F:	RIL_21	W	P		15	31	variable	44		63		70			73		
		9		16	border							border																
		10		1	border							border																
1	8	10	1	2	35	W	44	1	09CS7477	09CS7477	(SC56*TX7000)-F:	RIL_44	R	P		7	21		45		62		79			91		
1	8	10	1	3	35	E	44	1	09CS7477	09CS7477	(SC56*TX7000)-F:	RIL_44	R	P		18	29		52		72		83			97		
1	8	10	2	4	105	W	117	3	09CS7550	10CS10872	(SC56*TX7000)-F:	RIL_117	R	P		17	27		49		70		75			74		
1	8	10	2	5	105	E	117	3	09CS7550	10CS10872	(SC56*TX7000)-F:	RIL_117	R	P		18	31		51		72		77			74		
1	8	10	3	6	91	W	103	1	09CS7536	09CS7536	(SC56*TX7000)-F:	RIL_103	R	P		17	36		58		73		84			86		
1	8	10	3	7	91	E	103	1	09CS7536	09CS7536	(SC56*TX7000)-F:	RIL_103	R	P		17	33		63		74		82			83		
1	8	10	4	8	127	W	140	1	09CS7573	09CS7573	(SC56*TX7000)-F:	RIL_140	R	P		17	28		51		64		78			75		
1	8	10	4	9	127	E	140	1	09CS7573	09CS7573	(SC56*TX7000)-F:	RIL_140	R	P		15	29		53		61		75			74		
1	8	10	5	10	172	W	190	1	09CS7623	09CS7623	(SC56*TX7000)-F:	RIL_190	W	P		12	27		46		60		70			72		
1	8	10	5	11	172	E	190	1	09CS7623	09CS7623	(SC56*TX7000)-F:	RIL_190	W	P		17	33	variable	46		63		70			66	80	
1	8	10	6	12	165	W	182	1	09CS7615	09CS7615	(SC56*TX7000)-F:	RIL_182	R	P		18	35		49		67		80	100		91	111	
1	8	10	6	13	165	E	182	1	09CS7615	09CS7615	(SC56*TX7000)-F:	RIL_182	R	P		18	35		45		72		81	104		91	119	
1	8	10	7	14	90	W	102	1	09CS7535	09CS7535	(SC56*TX7000)-F:	RIL_102	R	P		17	33		47		60		74			80		
1	8	10	7	15	90	E	102	1	09CS7535	09CS7535	(SC56*TX7000)-F:	RIL_102	R	P		17	32	variable	46		52		66			77		
		10		16	border							border																
		11		1	border							border																
1	9	11	1	2	171	W	189	1	09CS7622	09CS7622	(SC56*TX7000)-F:	RIL_189	R	P		8	14		32		47		64			65		
1	9	11	1	3	171	E	189	1	09CS7622	09CS7622	(SC56*TX7000)-F:	RIL_189	R	P		11	25		43		53		72			70	86	
1	9	11	2	4	69	W	81	1	09CS7514	09CS7514	(SC56*TX7000)-F:	RIL_81	R	P		20	38		54		73		81			82		
1	9	11	2	5	69	E	81	1	09CS7514	09CS7514	(SC56*TX7000)-F:	RIL_81	R	P		20	39		50		70		82			85		
1	9	11	3	6	53	W	64	1	09CS7497	09CS7497	(SC56*TX7000)-F:	RIL_64	R	P		20	32		45		61		65			76		
1	9	11	3	7	53	E	64	1	09CS7497	09CS7497	(SC56*TX7000)-F:	RIL_64	R	P		20	30		45		63		69			77		
1	9	11	4	8	95	W	107	1	10CS10860	09CS7540	(SC56*TX7000)-F:	RIL_107	R	P		12	24		40		52		63			66		
1	9	11	4	9	95	E	107	1	10CS10860	09CS7540	(SC56*TX7000)-F:	RIL_107	R	P		15	29		42		59		64			67		

rep	D_small_block	Range	D_row	two_ROW_PLOT_NUMBER	MAC_ENTRY	West/East_subplot_Data_Row	TAM_Entry	TAM_Code	TAM_Source1	TAM_Source2	TAM_Pedigree	Genotype	Sd	Pl	Plot_status_PlantRemoval	Plant_ht_Aug24_cm	Plant_ht_Aug31_cm	comments	Plant_ht_Sep8_cm	comments_Sep8	Plant_ht_Sep15_cm	comments_Sep15	Plant_ht_Sep22_cm	Panicle_ht_Sep22_cm	comments	Plant_ht_Sep29_cm	Panicle_ht_Sep29_cm	comments
1	9	11	5	10	26	W	33	1	09CS7466	09CS7466	(SC56*TX7000)-F:	RIL_33	W	P		19	34		56		72		78			74	84	
1	9	11	5	11	26	E	33	1	09CS7466	09CS7466	(SC56*TX7000)-F:	RIL_33	W	P		18	35		54		70		79			75	86	
1	9	11	6	12	52	W	63	1	09CS7496	09CS7496	(SC56*TX7000)-F:	RIL_63	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	24		36		53		56			83		
1	9	11	6	13	52	E	63	1	09CS7496	09CS7496	(SC56*TX7000)-F:	RIL_63	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	22		32		46		62			78		
1	9	11	7	14	37	W	46	1	09CS7479	09CS7479	(SC56*TX7000)-F:	RIL_46	RW	P		12	24		43		58		67			65		
1	9	11	7	15	37	E	46	1	09CS7479	09CS7479	(SC56*TX7000)-F:	RIL_46	RW	P		13	23		41		51		62			62		
		11		16	border							border																
		12		1	border							border																
1	10	12	1	2	108	W	120	3	09CS7553	10CS10875	(SC56*TX7000)-F:	RIL_120	R	P		13	23		43		68		82			90		
1	10	12	1	3	108	E	120	3	09CS7553	10CS10875	(SC56*TX7000)-F:	RIL_120	R	P		13	29		50		67		80			95		
1	10	12	2	4	66	W	78	3	09CS7511		(SC56*TX7000)-F:	RIL_78	W	P	Sep21 off-type plants removed	19	35		45		64		72			73	105	
1	10	12	2	5	66	E	78	3	09CS7511		(SC56*TX7000)-F:	RIL_78	W	P	Sep21 off-type plants removed	20	32		51		65		74			74	109	
1	10	12	3	6	71	W	83	1	09CS7516	09CS7516	(SC56*TX7000)-F:	RIL_83	RW	P		17	34		51		68		78			81		
1	10	12	3	7	71	E	83	1	09CS7516	09CS7516	(SC56*TX7000)-F:	RIL_83	RW	P		13	25		47		62		75			80		
1	10	12	4	8	27	W	35	3	09CS7468	09CS7468	(SC56*TX7000)-F:	RIL_35	R	P		15	30		53		66		84			81		
1	10	12	4	9	27	E	35	3	09CS7468	09CS7468	(SC56*TX7000)-F:	RIL_35	R	P		19	32		56		76		85			84		
1	10	12	5	10	94	W	106	3	09CS7539	10CS10859	(SC56*TX7000)-F:	RIL_106	W	P		15	32		50		70		78			76		
1	10	12	5	11	94	E	106	3	09CS7539	10CS10859	(SC56*TX7000)-F:	RIL_106	W	P		16	31		53		73		77			78		
1	10	12	6	12	154	W	170	1	09CS7603	09CS7603	(SC56*TX7000)-F:	RIL_170	W	P		21	38		57		70		75			73	95	
1	10	12	6	13	154	E	170	1	09CS7603	09CS7603	(SC56*TX7000)-F:	RIL_170	W	P		18	35		58		70		72			77		
1	10	12	7	14	31	W	39	1	10CS10787	09CS7472	(SC56*TX7000)-F:	RIL_39	W	P		17	34		58		73		85			83	104	
1	10	12	7	15	31	E	39	1	10CS10787	09CS7472	(SC56*TX7000)-F:	RIL_39	W	P		16	34		57		72		84			84	112	
		12		16	border							border																
		13		1	border							border																
1	11	13	1	2	175	W	13960	1	10CS10959		SC56-14	SC56-14	W	P		16	30		54		71		77			75		
1	11	13	1	3	175	E	13960	1	10CS10959		SC56-14	SC56-14	W	P		14	28		60	one plnt 83 cm	62		73			76		
1	11	13	2	4	7	W	12	3	09CS7445	10CS10759	(SC56*TX7000)-F:	RIL_12	R	P		17	35		51		73		74			73	104	
1	11	13	2	5	7	E	12	3	09CS7445	10CS10759	(SC56*TX7000)-F:	RIL_12	R	P		18	34		49		62		70			70	83	
1	11	13	3	6	59	W	71	3	09CS7504	09CS7504	(SC56*TX7000)-F:	RIL_71	R	P		14	25		55		68		79	100		83		
1	11	13	3	7	59	E	71	3	09CS7504	09CS7504	(SC56*TX7000)-F:	RIL_71	R	P		11	23	variable	48		64		74			84		
1	11	13	4	8	145	W	160	1	09CS7593	09CS7593	(SC56*TX7000)-F:	RIL_160	W	P		16	33		66		73		76			78	115	
1	11	13	4	9	145	E	160	1	09CS7593	09CS7593	(SC56*TX7000)-F:	RIL_160	W	P		19	40		53		78		80	107		77	126	
1	11	13	5	10	156	W	172	1	09CS7605	09CS7605	(SC56*TX7000)-F:	RIL_172	W	P	Sep21 single off-type plant removed	17	27		46		64		75			77	114	
1	11	13	5	11	156	E	172	1	09CS7605	09CS7605	(SC56*TX7000)-F:	RIL_172	W	P	Sep21 single off-type plant removed	19	32		52		72		75			78	115	
1	11	13	6	12	123	W	135	1	09CS7568	09CS7568	(SC56*TX7000)-F:	RIL_135	R	P		18	34		48		73		88			96		
1	11	13	6	13	123	E	135	1	09CS7568	09CS7568	(SC56*TX7000)-F:	RIL_135	R	P		16	28		51		71		92			103		
1	11	13	7	14	115	W	127	3	09CS7560	09CS7560	(SC56*TX7000)-F:	RIL_127	W	P	Sep21 off-type plants removed	19	40		53		76/140		83			84	110	
1	11	13	7	15	115	E	127	3	09CS7560	09CS7560	(SC56*TX7000)-F:	RIL_127	W	P	Sep21 off-type plants removed	16	28		48		74		85			86	104	
		13		16	border							border																
		14		1	border							border																
1	12	14	1	2	173	W					CHECK HYBRID	Great Scott				19	41		55		71		102			118		
1	12	14	1	3	173	E					CHECK HYBRID	Great Scott				22	44		58		70		100			124		
1	12	14	2	4	70	W	82	1	09CS7515	09CS7515	(SC56*TX7000)-F:	RIL_82	R	P		14	26		37		57		63	72		64	87	
1	12	14	2	5	70	E	82	1	09CS7515	09CS7515	(SC56*TX7000)-F:	RIL_82	R	P		15	31		42		60		68	78		67	95	
1	12	14	3	6	135	W	149	1	09CS7582	09CS7582	(SC56*TX7000)-F:	RIL_149	W	P		8	19		34		56		60			70		
1	12	14	3	7	135	E	149	1	09CS7582	09CS7582	(SC56*TX7000)-F:	RIL_149	W	P		5	18		33	big gap	52		49			68		
1	12	14	4	8	155	W	171	1	09CS7604	09CS7604	(SC56*TX7000)-F:	RIL_171	RW	P		18	33	variable	49		64		77			65	92	
1	12	14	4	9	155	E	171	1	09CS7604	09CS7604	(SC56*TX7000)-F:	RIL_171	RW	P		16	35		55		66		78			68	89	
1	12	14	5	10	20	W	27	1	09CS7460	09CS7460	(SC56*TX7000)-F:	RIL_27	W	P		14	32		49		66		80			76		
1	12	14	5	11	20	E	27	1	09CS7460	09CS7460	(SC56*TX7000)-F:	RIL_27	W	P		16	34		48		68		78			75		
1	12	14	6	12	12	W	18	1	09CS7451	09CS7451	(SC56*TX7000)-F:	RIL_18	R	P	Sep21 single off-type plant removed	18	35		57		73		77			80		
1	12	14	6	13	12	E	18	1	09CS7451	09CS7451	(SC56*TX7000)-F:	RIL_18	R	P	Sep21 single off-type plant removed	17	34		51		77		80	105		78		
1	12	14	7	14	22	W	29	1	09CS7462	09CS7462	(SC56*TX7000)-F:	RIL_29	W	P		20	36		62		75		83			75	100	
1	12	14	7	15	22	E	29	1	09CS7462	09CS7462	(SC56*TX7000)-F:	RIL_29	W	P		12	29		48		66		76			76		
		14		16	border							border																
		15		1	border							border																
1	13	15	1	2	120	W	132	1	09CS7565	09CS7565	(SC56*TX7000)-F:	RIL_132	W	P		19	35		55		69		71	92		73	112	
1	13	15	1	3	120	E	132	1	09CS7565	09CS7565	(SC56*TX7000)-F:	RIL_132	W	P		19	35		55		67		68	100		72	114	
1	13	15	2	4	148	W	163	1	09CS7596	09CS7596	(SC56*TX7000)-F:	RIL_163	R	P		13	29		43		66		75			71	87	
1	13	15	2	5	148	E	163	1	09CS7596	09CS7596	(SC56*TX7000)-F:	RIL_163	R	P		15	32		48		69		73			73	88	
1	13	15	3	6	151	W	166	1	09CS7599	09CS7599	(SC56*TX7000)-F:	RIL_166	W	P		17	34		52		63		76			72	88	
1	13	15	3	7	151	E	166	1	09CS7599	09CS7599	(SC56*TX7000)-F:	RIL_166	W	P		16	30	variable	46		63		74			74	86	
1	13	15	4	8	48	W	59	3	09CS7492	09CS7492	(SC56*TX7000)-F:	RIL_59	R	P		15	34		52		68		70			82		
1	13	15	4	9	48	E	59	3	09CS7492	09CS7492	(SC56*TX7000)-F:	RIL_59	R	P		19	36		54		74		80			88		
1	13	15	5	10	40	W	49	1	09CS7482	09CS7482	(SC56*TX7000)-F:	RIL_49	R	P		19	34		60		76		79			79	103	
1	13	15	5	11	40	E	49	1	09CS7482	09CS7482	(SC56*TX7000)-F:	RIL_49	R	P		21	38		59		77		82			87	108	
1	13	15	6	12	110	W	122	1	09CS7555	09CS7555	(SC56*TX7000)-F:	RIL_122	R	P		18	33		51		61		68	80		66	82	
1	13	15	6	13	110	E	122	1	09CS7555	09CS7555	(SC56*TX7000)-F:	RIL_122	R	P		19	30		48		63		65	78		62	78	
1	13	15	7	14	124	W	136	1	09CS7569	09CS7569	(SC56*TX7000)-F:	RIL_136	W	P		16	35		47		68		70			70	87	
1	13	15	7	15	124	E	136	1	09CS7569	09CS7569	(SC56*TX7000)-F:	RIL_136	W	P		12	28		40		64		70			69	78	
		15		16	border							border																
		16		1	border							border																
1	14	16	1	2	106	W	118	1	09CS7551	09CS7551	(SC56*TX7000)-F:	RIL_118	W	P		18	35		53		62		64	75		68	86	
1	14	16	1	3	106	E	118	1	09CS7551	09CS7551	(SC56*TX7000)-F:	RIL_118	W	P		20	33		52		63		63	72		62	81	
1	14	16	2	4	140	W	154	3	09CS7587	10CS10910	(SC56*TX7000)-F:	RIL_154	W	P	Sep21 off-type plants removed	14	33		52		71		83			84		
1	14	16	2	5	140	E	154	3	09CS7587	10CS10910	(SC56*TX7000)-F:	RIL_154	W	P	Sep21 off-type plants removed	17	37		59		85		87			91	108	
1	14	16	3	6	129	W	143	1	09CS7576	09CS7576	(SC56*TX7000)-F:	RIL_143	W	P		18	39		57		75		86			86		
1	14	16	3	7	129	E	143	1	09CS7576	09CS7576	(SC56*TX7000)-F:	RIL_143	W	P		18	37	variable	54		70		84			80		
1	14	16	4	8	67	W	79	1	09CS7512	09CS7512	(SC56*TX7000)-F:	RIL_79	R	P		19	39		59		65		72			68	86	
1	14	16	4	9	67	E	79	1	09CS7512	09CS7512	(SC56*TX7000)-F:	RIL_79	R	P		20	38		56		68		72			65	85	
1	14	16	5	10	84	W	96	1	09CS7529	09CS7529	(SC56*TX7000)-F:	RIL_96	R	P		17	33		54		71		78			67		
1	14	16	5	11	84	E	96	1	09CS7529	09CS7529	(SC56*TX7000)-F:	RIL_96	R	P		18	37		54		73		77			69	81	
1	14	16	6	12	87	W	99	1	09CS7532	09CS7532	(SC56*TX7000)-F:	RIL_99	W	P		17	32		53		64		78			76		
1	14	16	6	13	87	E	99	1	09CS7532	09CS7532	(SC56*TX7000)-F:	RIL_99	W	P		19	34		56		75		84			77		
1	14	16	7	14	133	W	147	1	09CS7580	09CS7580	(SC56*TX7000)-F:	RIL_147	R	P		21	37		52		76		91			85		
1	14	16	7	15	133	E	147	1	09CS7580	09CS7580	(SC56*TX7000)-F:	RIL_147	R	P		16	34		48		70		82			81		
		16		16	border							border																
		17		1	border							border																
1	15	17	1	2	139	W	153	1	09CS7586	09CS7586	(SC56*TX7000)-F:	RIL_153	R	P		14	28		45		60		62			59	72	
1	15	17	1	3	139	E	153	1	09CS7586	09CS7586	(SC56*TX7000)-F:	RIL_153	R	P		15	27		45		54		62			60	73	
1	15	17	2	4	11	W	17	3	09CS7450		(SC56*TX7000)-F:	RIL_17	R	P	Sep21 off-type plants removed	18	40		64		74/108		79			82	100	
1	15	17	2	5	11	E	17	3	09CS7450		(SC56*TX7000)-F:	RIL_17	R	P	Sep21 off-type plants removed	21	38		65		64/102		75			72	90	
1	15	17	3	6	57	W	69	1	09CS7502	09CS7502	(SC56*TX7000)-F:	RIL_69	RW	P		16	34		54		72		82			102	134	
1	15	17	3	7	57	E	69	1	09CS7502	09CS7502	(SC56*TX7000)-F:	RIL_69	RW	P		17	34		48		70		86			95	115	
1	15	17	4	8	72	W	84	1	09CS7517	09CS7517	(SC56*TX7000)-F:	RIL_84	R	P		14	32	variable	44		63		79			79		
1	15	17	4	9	72	E	84	1	09CS7517	09CS7517	(SC56*TX7000)-F:	RIL_84	R	P		15	31		55		66		83			78		
1	15	17	5	10	74	W	86	1	09CS7519	09CS7519	(SC56*TX7000)-F:	RIL_86	W	P		20	42		64		80		78			75	106	
1	15	17	5	11	74	E	86	1	09CS7519	09CS7519	(SC56*TX7000)-F:	RIL_86	W	P		21	43		63		77		80			76	103	
1	15	17	6	12	47	W	57	1	09CS7490	09CS7490	(SC56*TX7000)-F:	RIL_57	W	P		17	38	gap due to	52	big gap	64		72			70	84	
1	15	17	6	13	47	E	57	1	09CS7490	09CS7490	(SC56*TX7000)-F:	RIL_57	W	P		19	38		54		67		75			78	93	
1	15	17	7	14	163	W	180	1	09CS7613	09CS7613	(SC56*TX7000)-F:	RIL_180	RW	P		15	32		51		64		74			79	89	
1	15	17	7	15	163	E	180	1	09CS7613	09CS7613	(SC56*TX7000)-F:	RIL_180	RW	P		14	33		46		65		74			74		
		17		16	border							border																
		18		1	border							border																
1	16	18	1	2	8	W	13	1	09CS7446	09CS7446	(SC56*TX7000)-F:	RIL_13	R	P		18	37		42		63		78			82		
1	16	18	1	3	8	E	13	1	09CS7446	09CS7446	(SC56*TX7000)-F:	RIL_13	R	P		20	35		42		66		82			81		
1	16	18	2	4	9	W	14	1	09CS7447	09CS7447	(SC56*TX7000)-F:	RIL_14	W	P		14	28		43		68		78			81		
1	16	18	2	5	9	E	14	1	09CS7447	09CS7447	(SC56*TX7000)-F:	RIL_14	W	P		15	31		46		68		75			84		
1	16	18	3	6	16	W	22	3	09CS7455	10CS10770	(SC56*TX7000)-F:	RIL_22	R	P		15	33		47		73		77			86		
1	16	18	3	7	16	E	22	3	09CS7455	10CS10770	(SC56*TX7000)-F:	RIL_22	R	P		12	26		45		60		70			73		
1	16	18	4	8	149	W	164	3	09CS7597		(SC56*TX7000)-F:	RIL_164	RW	P		18	32		48		64		70			69	118	
1	16	18	4	9	149	E	164	3	09CS7597		(SC56*TX7000)-F:	RIL_164	RW	P		14	29		46		63		72			68	83	
1	16	18	5	10	152	W	168	1	09CS7601	09CS7601	(SC56*TX7000)-F:	RIL_168	W	P		17	34		51		68		75			82	107	
1	16	18	5	11	152	E	168	1	09CS7601	09CS7601	(SC56*TX7000)-F:	RIL_168	W	P		20	39		57		73		76	101		82	129	
1	16	18	6	12	88	W	100	1	09CS7533	09CS7533	(SC56*TX7000)-F:	RIL_100	W	P		22	40		61		77		78			77	100	
1	16	18	6	13	88	E	100	1	09CS7533	09CS7533	(SC56*TX7000)-F:	RIL_100	W	P		21	38		58		74		79			76	108	
1	16	18	7	14	130	W	144	1	09CS7577	09CS7577	(SC56*TX7000)-F:	RIL_144	W	P		16	30		54		71		82			75	83	
1	16	18	7	15	130	E	144	1	09CS7577	09CS7577	(SC56*TX7000)-F:	RIL_144	W	P		11	22		39		62		69			69		
		18		16	border							border																
		19		1	border							border																
1	17	19	1	2	83	W	95	1	09CS7528	09CS7528	(SC56*TX7000)-F:	RIL_95	R	P		11	23		42		50		65			64		
1	17	19	1	3	83	E	95	1	09CS7528	09CS7528	(SC56*TX7000)-F:	RIL_95	R	P		14	25		44		52		65			63		
1	17	19	2	4	100	W	112	1	09CS7545	09CS7545	(SC56*TX7000)-F:	RIL_112	W	P		16	37		59		70		85			76		
1	17	19	2	5	100	E	112	1	09CS7545	09CS7545	(SC56*TX7000)-F:	RIL_112	W	P		18	38		56		65		77			75		
1	17	19	3	6	112	W	124	1	09CS7557	09CS7557	(SC56*TX7000)-F:	RIL_124	R	P		13	25		50		65		70			69		
1	17	19	3	7	112	E	124	1	09CS7557	09CS7557	(SC56*TX7000)-F:	RIL_124	R	P		15	26		46		71		74			74		
1	17	19	4	8	150	W	165	1	09CS7598	09CS7598	(SC56*TX7000)-F:	RIL_165	W	P		19	42		57		76		84			86		
1	17	19	4	9	150	E	165	1	09CS7598	09CS7598	(SC56*TX7000)-F:	RIL_165	W	P		20	39		56		73		87			85		
1	17	19	5	10	167	W	185	1	09CS7618	09CS7618	(SC56*TX7000)-F:	RIL_185	R	P		16	30		47		67		78			84		
1	17	19	5	11	167	E	185	1	09CS7618	09CS7618	(SC56*TX7000)-F:	RIL_185	R	P		21	32		50		65		79			85		
1	17	19	6	12	1	W	1	1	10CS10748	10CS10748-1	(SC56*TX7000)-F:	RIL_1	W	P		21	36		55		71		78			74	91	
1	17	19	6	13	1	E	1	1	10CS10748	10CS10748-1	(SC56*TX7000)-F:	RIL_1	W	P		21	35		45		61		72			69		
1	17	19	7	14	51	W	62	1	09CS7495	09CS7495	(SC56*TX7000)-F:	RIL_62	R	P		14	27		47		59		65			63	93	
1	17	19	7	15	51	E	62	1	09CS7495	09CS7495	(SC56*TX7000)-F:	RIL_62	R	P		14	26		51		64		60			60	97	
		19		16	border							border																
		20		1	border							border																
1	18	20	1	2	164	W	181	3	09CS7614	10CS10940	(SC56*TX7000)-F:	RIL_181	W	P		12	28		50		66		76			71		
1	18	20	1	3	164	E	181	3	09CS7614	10CS10940	(SC56*TX7000)-F:	RIL_181	W	P		15	32		46		68		73			69		
1	18	20	2	4	142	W	157	1	09CS7590	09CS7590	(SC56*TX7000)-F:	RIL_157	W	P		17	38		53		72		85			88	112	
1	18	20	2	5	142	E	157	1	09CS7590	09CS7590	(SC56*TX7000)-F:	RIL_157	W	P		17	37		52		74		83			86	98	
1	18	20	3	6	46	W	56	1	09CS7489	09CS7489	(SC56*TX7000)-F:	RIL_56	W	P		16	30		47		63		67			62	70	
1	18	20	3	7	46	E	56	1	09CS7489	09CS7489	(SC56*TX7000)-F:	RIL_56	W	P		15	35		55		65		70			63	77	
1	18	20	4	8	126	W	139	1	09CS7572	09CS7572	(SC56*TX7000)-F:	RIL_139	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	7	20		28		53		52			54	65	
1	18	20	4	9	126	E	139	1	09CS7572	09CS7572	(SC56*TX7000)-F:	RIL_139	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	8	18		34		54		57			52		
1	18	20	5	10	107	W	119	3	09CS7552	09CS7552	(SC56*TX7000)-F:	RIL_119	R	P	Sep21 off-type plants removed	19	44		70		73/108		82			79	114	
1	18	20	5	11	107	E	119	3	09CS7552	09CS7552	(SC56*TX7000)-F:	RIL_119	R	P	Sep21 off-type plants removed	21	42		62	one plnt 76 cm	73/122		77			73	116	
1	18	20	6	12	159	W	176	3	09CS7609	10CS10933	(SC56*TX7000)-F:	RIL_176	RW	P	Sep21 off-type plants removed	20	39		64		68/103		80			80	98	
1	18	20	6	13	159	E	176	3	09CS7609	10CS10933	(SC56*TX7000)-F:	RIL_176	RW	P	Sep21 off-type plants removed	18	32		58		73/102		84			86	120	
1	18	20	7	14	73	W	85	1	09CS7518	09CS7518	(SC56*TX7000)-F:	RIL_85	W	P		18	36		57		79		84			86		
1	18	20	7	15	73	E	85	1	09CS7518	09CS7518	(SC56*TX7000)-F:	RIL_85	W	P		12	26		46		65		80			83		
		20		16	border							border																
		21		1	border							border																
1	19	21	1	2	29	W	37	1	10CS10785	09CS7470	(SC56*TX7000)-F:	RIL_37	W	P		18	36		51		69		84			80		
1	19	21	1	3	29	E	37	1	10CS10785	09CS7470	(SC56*TX7000)-F:	RIL_37	W	P		18	35		55		70		86			81		
1	19	21	2	4	168	W	186	1	09CS7619	09CS7619	(SC56*TX7000)-F:	RIL_186	W	P		18	35		54		64		74			73	103	
1	19	21	2	5	168	E	186	1	09CS7619	09CS7619	(SC56*TX7000)-F:	RIL_186	W	P		17	31		55		63		75			75	96	
1	19	21	3	6	68	W	80	1	09CS7513	09CS7513	(SC56*TX7000)-F:	RIL_80	R	P		11	17		32		55		67			74		
1	19	21	3	7	68	E	80	1	09CS7513	09CS7513	(SC56*TX7000)-F:	RIL_80	R	P		10	23		44		54		65			74		
1	19	21	4	8	36	W	45	3	09CS7478	10CS10794	(SC56*TX7000)-F:	RIL_45	W	P	Sep21 single off-type plant removed	14	31		55		68		77			85		
1	19	21	4	9	36	E	45	3	09CS7478	10CS10794	(SC56*TX7000)-F:	RIL_45	W	P	Sep21 single off-type plant removed	18	36		58		71		80			83		
1	19	21	5	10	128	W	141	1	09CS7574	09CS7574	(SC56*TX7000)-F:	RIL_141	W	P		18	34		53		69		77			74		
1	19	21	5	11	128	E	141	1	09CS7574	09CS7574	(SC56*TX7000)-F:	RIL_141	W	P		17	34		56		68		76			73		
1	19	21	6	12	5	W	10	1	09CS7443	09CS7443	(SC56*TX7000)-F:	RIL_10	RW	P		23	42		63		84		81			82	100	
1	19	21	6	13	5	E	10	1	09CS7443	09CS7443	(SC56*TX7000)-F:	RIL_10	RW	P		20	35		58		80		82			79	90	
1	19	21	7	14	116	W	128	1	09CS7561	09CS7561	(SC56*TX7000)-F:	RIL_128	R	P		18	33		54		73		84			89		
1	19	21	7	15	116	E	128	1	09CS7561	09CS7561	(SC56*TX7000)-F:	RIL_128	R	P		16	26		46		65		82			84		
		21		16	border							border																
		22		1	border							border																
1	20	22	1	2	76	W	88	1	09CS7521	09CS7521	(SC56*TX7000)-F:	RIL_88	RW	P		15	30		44		56		69			70	91	

rep	D_small_block	Range	D_row	two_ROW_PLOT_NUMBER	MAC_ENTRY	West/East_subplot_Data_Row	TAM_Entry	TAM_Code	TAM_Source1	TAM_Source2	TAM_Pedigree	Genotype	Sd	Pl	Plot_status_PlantRemoval	Plant_ht_Aug24_cm	Plant_ht_Aug31_cm	comments	Plant_ht_Sep8_cm	comments_Sep8	Plant_ht_Sep15_cm	comments_Sep15	Plant_ht_Sep22_cm	Panicle_ht_Sep22_cm	comments	Plant_ht_Sep29_cm	Panicle_ht_Sep29_cm	comments
1	20	22	1	3	76	E	88	1	09CS7521	09CS7521	(SC56*TX7000)-F	RIL_88	RW	P		18	32		51		64		70	84		70	110	
1	20	22	2	4	10	W	16	1	09CS7449	09CS7449	(SC56*TX7000)-F	RIL_16	W	P		15	28		45		61		63			61	80	
1	20	22	2	5	10	E	16	1	09CS7449	09CS7449	(SC56*TX7000)-F	RIL_16	W	P		16	26		43		56		61			60	72	
1	20	22	3	6	78	W	90	3	09CS7523		(SC56*TX7000)-F	RIL_90	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	13	24		38		53		68			76		
1	20	22	3	7	78	E	90	3	09CS7523		(SC56*TX7000)-F	RIL_90	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	14	25		40		60		70			77		
1	20	22	4	8	54	W	65	3	09CS7498	09CS7498	(SC56*TX7000)-F	RIL_65	R	P		18	32		48		65		78			74		
1	20	22	4	9	54	E	65	3	09CS7498	09CS7498	(SC56*TX7000)-F	RIL_65	R	P		15	33		47		68		86			71		
1	20	22	5	10	30	W	38	1	10CS10786	09CS7471	(SC56*TX7000)-F	RIL_38	W	P		18	34		53		77		84			87		
1	20	22	5	11	30	E	38	1	10CS10786	09CS7471	(SC56*TX7000)-F	RIL_38	W	P		18	33		55		73		86			81		
1	20	22	6	12	122	W	134	1	09CS7567	09CS7567	(SC56*TX7000)-F	RIL_134	R	P		19	34		54		66		64	80		70	102	
1	20	22	6	13	122	E	134	1	09CS7567	09CS7567	(SC56*TX7000)-F	RIL_134	R	P		18	33		50		68		72			69	99	
1	20	22	7	14	109	W	121	1	09CS7554	09CS7554	(SC56*TX7000)-F	RIL_121	W	P	Sep21 single off-type plant removed	12	26		38		56		65			60	81	
1	20	22	7	15	109	E	121	1	09CS7554	09CS7554	(SC56*TX7000)-F	RIL_121	W	P	Sep21 single off-type plant removed	12	23		40		62		63			59	76	
		22		16	border							border																
		23		1	border							border																
1	21	23	1	2	93	W	105	1	09CS7538	09CS7538	(SC56*TX7000)-F	RIL_105	W	P		12	30		43		58		69			66	77	
1	21	23	1	3	93	E	105	1	09CS7538	09CS7538	(SC56*TX7000)-F	RIL_105	W	P		18	36		50		62		68			64	72	
1	21	23	2	4	38	W	47	1	09CS7480	09CS7480	(SC56*TX7000)-F	RIL_47	R	P		16	32		47		64		74			72		
1	21	23	2	5	38	E	47	1	09CS7480	09CS7480	(SC56*TX7000)-F	RIL_47	R	P		17	34		50		65		75			71		
1	21	23	3	6	64	W	76	1	09CS7509	09CS7509	(SC56*TX7000)-F	RIL_76	R	P		12	29		45		65		68			72		
1	21	23	3	7	64	E	76	1	09CS7509	09CS7509	(SC56*TX7000)-F	RIL_76	R	P		16	32		45		64		72			71	94	
1	21	23	4	8	2	W	3	1	10CS10750	10CS10750-1	(SC56*TX7000)-F	RIL_3	W	P		19	40		58		72		83			88	114	
1	21	23	4	9	2	E	3	1	10CS10750	10CS10750-1	(SC56*TX7000)-F	RIL_3	W	P		18	36		54		76		87			97	131	
1	21	23	5	10	39	W	48	3	09CS7481	09CS7481	(SC56*TX7000)-F	RIL_48	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	8	17		34		64		74			63		
1	21	23	5	11	39	E	48	3	09CS7481	09CS7481	(SC56*TX7000)-F	RIL_48	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	13	11	Aug 24, one	48		74		105			60		
1	21	23	6	12	24	W	31	1	10CS10779	09CS7464	(SC56*TX7000)-F	RIL_31	W	P		18	35		55		76		91			90		
1	21	23	6	13	24	E	31	1	10CS10779	09CS7464	(SC56*TX7000)-F	RIL_31	W	P		20	37		53		74		85			87		
1	21	23	7	14	131	W	145	1	09CS7578	09CS7578	(SC56*TX7000)-F	RIL_145	RW	P		10	18		43		56		72			80		
1	21	23	7	15	131	E	145	1	09CS7578	09CS7578	(SC56*TX7000)-F	RIL_145	RW	P		12	25		44		61		74			79		
		23		16	border							border																
		24		1	border							border																
1	22	24	1	2	79	W	91	1	09CS7524	09CS7524	(SC56*TX7000)-F	RIL_91	W	P		15	29		50		69		77			74	93	
1	22	24	1	3	79	E	91	1	09CS7524	09CS7524	(SC56*TX7000)-F	RIL_91	W	P		18	32		51		66		75			76	85	
1	22	24	2	4	118	W	130	1	09CS7563	09CS7563	(SC56*TX7000)-F	RIL_130	W	P		17	31		45		57		63			65	76	
1	22	24	2	5	118	E	130	1	09CS7563	09CS7563	(SC56*TX7000)-F	RIL_130	W	P		16	30		47		61		67			66	82	
1	22	24	3	6	55	W	66	1	09CS7499	09CS7499	(SC56*TX7000)-F	RIL_66	RW	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	14	24		31		55		61			61		
1	22	24	3	7	55	E	66	1	09CS7499	09CS7499	(SC56*TX7000)-F	RIL_66	RW	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	15	23		42		57		59			60		
1	22	24	4	8	111	W	123	1	09CS7556	09CS7556	(SC56*TX7000)-F	RIL_123	R	P		20	39		58		61		68	83		67	95	
1	22	24	4	9	111	E	123	1	09CS7556	09CS7556	(SC56*TX7000)-F	RIL_123	R	P		21	41		56		64		64	80		72	105	
1	22	24	5	10	132	W	146	1	09CS7579	09CS7579	(SC56*TX7000)-F	RIL_146	W	P		18	35		55		72		90			91	116	
1	22	24	5	11	132	E	146	1	09CS7579	09CS7579	(SC56*TX7000)-F	RIL_146	W	P		17	34		56		75		93			94	112	
1	22	24	6	12	134	W	148	1	09CS7581	09CS7581	(SC56*TX7000)-F	RIL_148	RW	P		19	32		52		67		85			87		
1	22	24	6	13	134	E	148	1	09CS7581	09CS7581	(SC56*TX7000)-F	RIL_148	RW	P		16	31		57		70		84			85		
1	22	24	7	14	119	W	194	1	10CS10953		(SC56*TX7000)-F	RIL_194	W	P		14	25		37		63		66			71	85	
1	22	24	7	15	119	E	194	1	10CS10953		(SC56*TX7000)-F	RIL_194	W	P		13	23		41		60		68			73	88	
		24		16	border							border																
		25		1	border							border																
1	23	25	1	2	75	W	87	1	09CS7520	09CS7520	(SC56*TX7000)-F	RIL_87	W	P		16	28		49		60		62			64	74	
1	23	25	1	3	75	E	87	1	09CS7520	09CS7520	(SC56*TX7000)-F	RIL_87	W	P		17	30		53		65		70			69	87	
1	23	25	2	4	147	W	162	1	09CS7595	09CS7595	(SC56*TX7000)-F	RIL_162	R	P		15	29		46		53		62			57	100	
1	23	25	2	5	147	E	162	1	09CS7595	09CS7595	(SC56*TX7000)-F	RIL_162	R	P		12	20		40		53		60			56	83	
1	23	25	3	6	85	W	97	1	09CS7530	09CS7530	(SC56*TX7000)-F	RIL_97	W	P		16	30		51		63		82			79		
1	23	25	3	7	85	E	97	1	09CS7530	09CS7530	(SC56*TX7000)-F	RIL_97	W	P		16	29		46		61		72			77		
1	23	25	4	8	157	W	173	1	09CS7606	09CS7606	(SC56*TX7000)-F	RIL_173	R	P		17	28		48		70		93			96	113	
1	23	25	4	9	157	E	173	1	09CS7606	09CS7606	(SC56*TX7000)-F	RIL_173	R	P		18	29		55		72		97			105	113	
1	23	25	5	10	143	W	158	3	09CS7591	10CS10916	(SC56*TX7000)-F	RIL_158	R	P		15	26		48		65		70			68		
1	23	25	5	11	143	E	158	3	09CS7591	10CS10916	(SC56*TX7000)-F	RIL_158	R	P		16	25		46		62		68			65		
1	23	25	6	12	114	W	126	1	09CS7559	09CS7559	(SC56*TX7000)-F	RIL_126	W	P		13	27		50		65		73			70	99	
1	23	25	6	13	114	E	126	1	09CS7559	09CS7559	(SC56*TX7000)-F	RIL_126	W	P		12	25		52		65		71			72		
1	23	25	7	14	77	W	89	1	09CS7522	09CS7522	(SC56*TX7000)-F	RIL_89	R	P		13	24		42		60		65			67	81	
1	23	25	7	15	77	E	89	1	09CS7522	09CS7522	(SC56*TX7000)-F	RIL_89	R	P		14	31		40		59		68			73	90	
		25		16	border							border																
		26		1	border							border																
1	24	26	1	2	14	W	20	1	09CS7453	09CS7453	(SC56*TX7000)-F	RIL_20	R	P		15	26		41		56		72			73		
1	24	26	1	3	14	E	20	1	09CS7453	09CS7453	(SC56*TX7000)-F	RIL_20	R	P		16	32		51		62		74			78		
1	24	26	2	4	42	W	51	1	09CS7484	09CS7484	(SC56*TX7000)-F	RIL_51	R	P		17	33		56		73		81			70		
1	24	26	2	5	42	E	51	1	09CS7484	09CS7484	(SC56*TX7000)-F	RIL_51	R	P		14	28		49		67		80			72		
1	24	26	3	6	17	W	23	1	09CS7456	09CS7456	(SC56*TX7000)-F	RIL_23	R	P		20	38		64		81		93			84		
1	24	26	3	7	17	E	23	1	09CS7456	09CS7456	(SC56*TX7000)-F	RIL_23	R	P		20	33		56		77		90			83		
1	24	26	4	8	50	W	61	3	09CS7494	09CS7494	(SC56*TX7000)-F	RIL_61	R	P		14	29		45		60		72			73		
1	24	26	4	9	50	E	61	3	09CS7494	09CS7494	(SC56*TX7000)-F	RIL_61	R	P		12	27		47		58		74			75		
1	24	26	5	10	97	W	109	1	09CS7542	09CS7542	(SC56*TX7000)-F	RIL_109	W	P		17	31		55		67		81			76		
1	24	26	5	11	97	E	109	1	09CS7542	09CS7542	(SC56*TX7000)-F	RIL_109	W	P		15	30		50		64		77			74		
1	24	26	6	12	13	W	19	1	09CS7452	09CS7452	(SC56*TX7000)-F	RIL_19	R	P		14	26		46		64		73			69	80	
1	24	26	6	13	13	E	19	1	09CS7452	09CS7452	(SC56*TX7000)-F	RIL_19	R	P		19	33		55		71		75			74	96	
1	24	26	7	14	144	W	159	1	09CS7592	09CS7592	(SC56*TX7000)-F	RIL_159	R	P		12	22		40		51		59			60		
1	24	26	7	15	144	E	159	1	09CS7592	09CS7592	(SC56*TX7000)-F	RIL_159	R	P		10	17		29		39		54			55		
		26		16	border							border																
		27		1	border							border																
1	25	27	1	2	65	W	77	3	09CS7510	09CS7510	(SC56*TX7000)-F	RIL_77	R	P	Sep21 single off-type plant removed	9	29		35		52		62			73		
1	25	27	1	3	65	E	77	3	09CS7510	09CS7510	(SC56*TX7000)-F	RIL_77	R	P	Sep21 single off-type plant removed	15	34		51		53		65			66	92	
1	25	27	2	4	34	W	43	1	09CS7476	09CS7476	(SC56*TX7000)-F	RIL_43	R	P		19	33		62		71		75			74	102	
1	25	27	2	5	34	E	43	1	09CS7476	09CS7476	(SC56*TX7000)-F	RIL_43	R	P		18	30		54		65		73			69	89	
1	25	27	3	6	99	W	111	1	09CS7544	09CS7544	(SC56*TX7000)-F	RIL_111	R	P		19	37		56		72		79			76		
1	25	27	3	7	99	E	111	1	09CS7544	09CS7544	(SC56*TX7000)-F	RIL_111	R	P		16	38		59		70		82			78		
1	25	27	4	8	81	W	93	1	09CS7526	09CS7526	(SC56*TX7000)-F	RIL_93	RW	P		20	42		65		83		84			84	102	
1	25	27	4	9	81	E	93	1	09CS7526	09CS7526	(SC56*TX7000)-F	RIL_93	RW	P		19	41		62		80		81			80	107	
1	25	27	5	10	161	W	178	1	09CS7611	09CS7611	(SC56*TX7000)-F	RIL_178	R	P		20	30		61		73		72			80	110	
1	25	27	5	11	161	E	178	1	09CS7611	09CS7611	(SC56*TX7000)-F	RIL_178	R	P		18	33		60		72		74			85	115	
1	25	27	6	12	28	W	36	3	09CS7469	09CS7469	(SC56*TX7000)-F	RIL_36	R	P		15	33		54		70		80			83		
1	25	27	6	13	28	E	36	3	09CS7469	09CS7469	(SC56*TX7000)-F	RIL_36	R	P		19	34		60		73		81			86		
1	25	27	7	14	160	W	177	1	09CS7610	09CS7610	(SC56*TX7000)-F	RIL_177	W	P		19	27		58		68		71	92		77	95	
1	25	27	7	15	160	E	177	1	09CS7610	09CS7610	(SC56*TX7000)-F	RIL_177	W	P		15	14		57		64		70	87		74	96	
		27		16	border							border																
		28		1	border							border																
2	1	28	1	2	43	W	52	1	09CS7485	09CS7485	(SC56*TX7000)-F	RIL_52	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	13	25		43		56		68			66		
2	1	28	1	3	43	E	52	1	09CS7485	09CS7485	(SC56*TX7000)-F	RIL_52	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	23		40		58		71			69		
2	1	28	2	4	175	W	13960	1	10CS10959		SC56-14	SC56-14	W	P		18	35		55		68		80			77		
2	1	28	2	5	175	E	13960	1	10CS10959		SC56-14	SC56-14	W	P		17	31		48		71		74			75		
2	1	28	3	6	69	W	81	1	09CS7514	09CS7514	(SC56*TX7000)-F	RIL_81	R	P		16	32		56		71		79			80		
2	1	28	3	7	69	E	81	1	09CS7514	09CS7514	(SC56*TX7000)-F	RIL_81	R	P		15	27		51		66		78			81		
2	1	28	4	8	172	W	190	1	09CS7623	09CS7623	(SC56*TX7000)-F	RIL_190	W	P		16	33		58		66		72			67	90	
2	1	28	4	9	172	E	190	1	09CS7623	09CS7623	(SC56*TX7000)-F	RIL_190	W	P		18	35		51		59		72			68	78	
2	1	28	5	10	108	W	120	3	09CS7553	10CS10875	(SC56*TX7000)-F	RIL_120	R	P		15	28		52		70		86			87		
2	1	28	5	11	108	E	120	3	09CS7553	10CS10875	(SC56*TX7000)-F	RIL_120	R	P		18	36		61		74		86			95		
2	1	28	6	12	76	W	88	1	09CS7521	09CS7521	(SC56*TX7000)-F	RIL_88	RW	P		18	34		53		68		71			74	97	
2	1	28	6	13	76	E	88	1	09CS7521	09CS7521	(SC56*TX7000)-F	RIL_88	RW	P		16	32		52		67		70			76	97	
2	1	28	7	14	93	W	105	1	09CS7538	09CS7538	(SC56*TX7000)-F	RIL_105	W	P		17	32		41		50		57			56	70	
2	1	28	7	15	93	E	105	1	09CS7538	09CS7538	(SC56*TX7000)-F	RIL_105	W	P		14	26		42		53		62			64	77	
		28		16	border							border																
		29		1	border							border																
2	2	29	1	2	95	W	107	1	10CS10860	09CS7540	(SC56*TX7000)-F	RIL_107	R	P		12	25		46		65		73			75		
2	2	29	1	3	95	E	107	1	10CS10860	09CS7540	(SC56*TX7000)-F	RIL_107	R	P		19	33		52		62		72			73	102	
2	2	29	2	4	120	W	132	1	09CS7565	09CS7565	(SC56*TX7000)-F	RIL_132	W	P		21	32		52		65		72	100		70	99	
2	2	29	2	5	120	E	132	1	09CS7565	09CS7565	(SC56*TX7000)-F	RIL_132	W	P		18	34		56		66		73	95		74	100	
2	2	29	3	6	55	W	66	1	09CS7499	09CS7499	(SC56*TX7000)-F	RIL_66	RW	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	14	25		48		61		65			63		
2	2	29	3	7	55	E	66	1	09CS7499	09CS7499	(SC56*TX7000)-F	RIL_66	RW	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	20		41		59		72			70		
2	2	29	4	8	128	W	141	1	09CS7574	09CS7574	(SC56*TX7000)-F	RIL_141	W	P		13	26		47		64		70			68		
2	2	29	4	9	128	E	141	1	09CS7574	09CS7574	(SC56*TX7000)-F	RIL_141	W	P		18	32		54		72		81			73		
2	2	29	5	10	158	W	175	3	09CS7608	09CS7608	(SC56*TX7000)-F	RIL_175	R	P	Sep21 off-type plants removed	19	36		61		74/103		78	100		77	127	
2	2	29	5	11	158	E	175	3	09CS7608	09CS7608	(SC56*TX7000)-F	RIL_175	R	P	Sep21 off-type plants removed	20	36		66		68/112		76	99		74	113	
2	2	29	6	12	94	W	106	3	09CS7539	10CS10859	(SC56*TX7000)-F	RIL_106	W	P	Sep21 single off-type plant removed	18	35		57		70		85			75		
2	2	29	6	13	94	E	106	3	09CS7539	10CS10859	(SC56*TX7000)-F	RIL_106	W	P	Sep21 single off-type plant removed	18	33		60		69/104		80			74		
2	2	29	7	14	33	W	41	1	09CS7474	09CS7474	(SC56*TX7000)-F	RIL_41	R	P		17	29		49		64		72			67	80	
2	2	29	7	15	33	E	41	1	09CS7474	09CS7474	(SC56*TX7000)-F	RIL_41	R	P		19	30	variable	47		66		71			69	80	
		29		16	border							border																
		30		1	border							border																
2	3	30	1	2	47	W	57	1	09CS7490	09CS7490	(SC56*TX7000)-F	RIL_57	W	P		21	39		58		65		70	87		67	86	
2	3	30	1	3	47	E	57	1	09CS7490	09CS7490	(SC56*TX7000)-F	RIL_57	W	P		20	39		58		68		69	88		72	93	
2	3	30	2	4	100	W	112	1	09CS7545	09CS7545	(SC56*TX7000)-F	RIL_112	W	P		21	40		57		74		85			84		
2	3	30	2	5	100	E	112	1	09CS7545	09CS7545	(SC56*TX7000)-F	RIL_112	W	P		20	38		55		73		84			85		
2	3	30	3	6	6	W	11	3	09CS7444	10CS10758	(SC56*TX7000)-F	RIL_11	RW	P		17	34		54		73		82			80		
2	3	30	3	7	6	E	11	3	09CS7444	10CS10758	(SC56*TX7000)-F	RIL_11	RW	P		16	36	variable	57		65		76			81		
2	3	30	4	8	117	W	129	3	09CS7562	09CS7562	(SC56*TX7000)-F	RIL_129	R	P	Sep21 off-type plants removed	17	39		58		81		73			76	94	
2	3	30	4	9	117	E	129	3	09CS7562	09CS7562	(SC56*TX7000)-F	RIL_129	R	P	Sep21 off-type plants removed	20	34		61		81		92/75			82	105	
2	3	30	5	10	105	W	117	3	09CS7550	10CS10872	(SC56*TX7000)-F	RIL_117	R	P	Sep21 single off-type plant removed	17	31		54		71		76			74		
2	3	30	5	11	105	E	117	3	09CS7550	10CS10872	(SC56*TX7000)-F	RIL_117	R	P	Sep21 single off-type plant removed	16	30		47		63		77			77		
2	3	30	6	12	73	W	85	1	09CS7518	09CS7518	(SC56*TX7000)-F	RIL_85	W	P	Sep21 single off-type plant removed	21	41		60		82		93			83	105	
2	3	30	6	13	73	E	85	1	09CS7518	09CS7518	(SC56*TX7000)-F	RIL_85	W	P	Sep21 single off-type plant removed	18	35		56		75		90			86	97	
2	3	30	7	14	71	W	83	1	09CS7516	09CS7516	(SC56*TX7000)-F	RIL_83	RW	P		16	34		50		66		77			75		
2	3	30	7	15	71	E	83	1	09CS7516	09CS7516	(SC56*TX7000)-F	RIL_83	RW	P		15	29		51		68		75			76		
		30		16	border							border																
		31		1	border							border																
2	4	31	1	2	24	W	31	1	10CS10779	09CS7464	(SC56*TX7000)-F	RIL_31	W	P		22	46		68		87		92			93		
2	4	31	1	3	24	E	31	1	10CS10779	09CS7464	(SC56*TX7000)-F	RIL_31	W	P		22	43		63		90		99			98		
2	4	31	2	4	101	W	113	3	09CS7546	10CS10868	(SC56*TX7000)-F	RIL_113	W	P	Sep21 off-type plants removed	15	33		52		73		95			78		
2	4	31	2	5	101	E	113	3	09CS7546	10CS10868	(SC56*TX7000)-F	RIL_113	W	P	Sep21 off-type plants removed	16	35		54		71		89			74		
2	4	31	3	6	160	W	177	1	09CS7610	09CS7610	(SC56*TX7000)-F	RIL_177	W	P		22	43		61		72		74	90		75	108	
2	4	31	3	7	160	E	177	1	09CS7610	09CS7610	(SC56*TX7000)-F	RIL_177	W	P		21	40		56		73		77	98		77	103	
2	4	31	4	8	74	W	86	1	09CS7519	09CS7519	(SC56*TX7000)-F	RIL_86	W	P		21	41		67		83		82			80	107	
2	4	31	4	9	74	E	86	1	09CS7519	09CS7519	(SC56*TX7000)-F	RIL_86	W	P		19	44		63		81		83			83	106	
2	4	31	5	10	9	W	14	1	09CS7447	09CS7447	(SC56*TX7000)-F	RIL_14	W	P		16	29		48		62		75			74	86	
2	4	31	5	11	9	E	14	1	09CS7447	09CS7447	(SC56*TX7000)-F	RIL_14	W	P		14	27		46		55		71			68	79	
2	4	31	6	12	162	W	179	1	09CS7612	09CS7612	(SC56*TX7000)-F	RIL_179	R	P		19	34		57		70		68	78		69	88	
2	4	31	6	13	162	E	179	1	09CS7612	09CS7612	(SC56*TX7000)-F	RIL_179	R	P		18	32		52		61		67	81		68	104	
2	4	31	7	14	119	W	194	1	10CS10953		(SC56*TX7000)-F	RIL_194	W	P		17	30		52		64		72			81	102	
2	4	31	7	15	119	E	194	1	10CS10953		(SC56*TX7000)-F	RIL_194	W	P		17	32		52		65		73			73	97	
		31		16	border							border																
		32		1	border							border																
2	5	32	1	2	141	W	156	3	09CS7589	10CS10914	(SC56*TX7000)-F	RIL_156	W	P		16	33		65		75		91			96		
2	5	32	1	3	141	E	156	3	09CS7589	10CS10914	(SC56*TX7000)-F	RIL_156	W	P		19	36		67		81		89			102		
2	5	32	2	4	164	W	181	3	09CS7614	10CS10940	(SC56*TX7000)-F	RIL_181	W	P	Sep21 single off-type plant removed	14	32		54		65		75			74		
2	5	32	2	5	164	E	181	3	09CS7614	10CS10940	(SC56*TX7000)-F	RIL_181	W	P	Sep21 single off-type plant removed	19	37		54		70		74			76		
2	5	32	3	6	48	W	59	3	09CS7492	09CS7492	(SC56*TX7000)-F	RIL_59	R	P		20	37		53		63		83			87		
2	5	32	3	7	48	E	59	3	09CS7492	09CS7492	(SC56*TX7000)-F	RIL_59	R	P		18	32		48		66		80			85		
2	5	32	4	8	64	W	76	1	09CS7509	09CS7509	(SC56*TX7000)-F	RIL_76	R	P	Sep21 single off-type plant removed	15	36		50		62		68			70	97	
2	5	32	4	9	64	E	76	1	09CS7509	09CS7509	(SC56*TX7000)-F	RIL_76	R	P	Sep21 single off-type plant removed	16	31		51		61		69			75	93	
2	5	32	5	10	155	W	171	1	09CS7604	09CS7604	(SC56*TX7000)-F	RIL_171	RW	P		17	37		55		62		71			70	85	
2	5	32	5	11	155	E	171	1	09CS7604	09CS7604	(SC56*TX7000)-F	RIL_171	RW	P		17	32		44		62		66			64	88	

rep	D_small_block	**Range**	**D_row**	two_ROW_PLOT_NUMBER	MAC_ENTRY	West/East_subplot_Data_Row	TAM_Entry	TAM_Code	TAM_Source1	TAM_Source2	TAM_Pedigree	Genotype	Sd	Pl	Plot_status_PlantRemoval	Plant_ht_Aug24_cm	Plant_ht_Aug31_cm	comments	Plant_ht_Sep8_cm	comments_Sep8	Plant_ht_Sep15_cm	comments_Sep15	Plant_ht_Sep22_cm	Panicle_ht_Sep22_cm	comments	Plant_ht_Sep29_cm	Panicle_ht_Sep29_cm	comments
2	5	**32**	**6**	12	174	W					TX7000	TX7000				21	39		58		68		71	81		75	107	
2	5	**32**	**6**	13	174	E					TX7000	Tx7000				20	39		56		70		72	93		77	105	
2	5	**32**	**7**	14	16	W	22	3	09CS7455	10CS10770	(SC56*TX7000)-F	RIL_22	R	P		11	31		47		62		74			69		
2	5	**32**	**7**	15	16	E	22	3	09CS7455	10CS10770	(SC56*TX7000)-F	RIL_22	R	P		12	27		46		51		68			68		
		32		16	border							border																
		33		1	border							border																
2	6	**33**	**1**	2	34	W	43	1	09CS7476	09CS7476	(SC56*TX7000)-F	RIL_43	R	P		11	41		56		70		75			73	93	
2	6	**33**	**1**	3	34	E	43	1	09CS7476	09CS7476	(SC56*TX7000)-F	RIL_43	R	P		16	40		54		68		75			77	96	
2	6	**33**	**2**	4	82	W	94	1	09CS7527	09CS7527	(SC56*TX7000)-F	RIL_94	RW	P		21	34		51		60		70	89		73	99	
2	6	**33**	**2**	5	82	E	94	1	09CS7527	09CS7527	(SC56*TX7000)-F	RIL_94	RW	P		19	36		51		62		68	88		75	102	
2	6	**33**	**3**	6	46	W	56	1	09CS7489	09CS7489	(SC56*TX7000)-F	RIL_56	W	P		21	41		53		64		65			66	83	
2	6	**33**	**3**	7	46	E	56	1	09CS7489	09CS7489	(SC56*TX7000)-F	RIL_56	W	P		19	38		51		62		67			64	77	
2	6	**33**	**4**	8	68	W	80	1	09CS7513	09CS7513	(SC56*TX7000)-F	RIL_80	R	P		18	31		54		68		71			77		
2	6	**33**	**4**	9	68	E	80	1	09CS7513	09CS7513	(SC56*TX7000)-F	RIL_80	R	P		16	29		52		65		73			80		
2	6	**33**	**5**	10	96	W	108	1	09CS7541	09CS7541	(SC56*TX7000)-F	RIL_108	W	P		19	36		53		72		80			81	129	
2	6	**33**	**5**	11	96	E	108	1	09CS7541	09CS7541	(SC56*TX7000)-F	RIL_108	W	P		18	36		58		73		79			84	118	
2	6	**33**	**6**	12	143	W	158	3	09CS7591	10CS10916	(SC56*TX7000)-F	RIL_158	R	P		18	29		53		59		71			67		
2	6	**33**	**6**	13	143	E	158	3	09CS7591	10CS10916	(SC56*TX7000)-F	RIL_158	R	P		16	37		58		71		72			71		
2	6	**33**	**7**	14	35	W	44	1	09CS7477	09CS7477	(SC56*TX7000)-F	RIL_44	R	P		22	35		53		61		75			95		
2	6	**33**	**7**	15	35	E	44	1	09CS7477	09CS7477	(SC56*TX7000)-F	RIL_44	R	P		20	23		45		54		70			90		
		33		16	border							border																
		34		1	border							border																
2	7	**34**	**1**	2	161	W	178	1	09CS7611	09CS7611	(SC56*TX7000)-F	RIL_178	R	P		20	42		57		67		77			82	110	
2	7	**34**	**1**	3	161	E	178	1	09CS7611	09CS7611	(SC56*TX7000)-F	RIL_178	R	P		20	42		53		72		73			79	114	
2	7	**34**	**2**	4	110	W	122	1	09CS7555	09CS7555	(SC56*TX7000)-F	RIL_122	R	P		16	31		52		58		64	77		61	84	
2	7	**34**	**2**	5	110	E	122	1	09CS7555	09CS7555	(SC56*TX7000)-F	RIL_122	R	P		19	35		50		60		62	76		62	90	
2	7	**34**	**3**	6	87	W	99	1	09CS7532	09CS7532	(SC56*TX7000)-F	RIL_99	W	P		19	36		52		68		83			85		
2	7	**34**	**3**	7	87	E	99	1	09CS7532	09CS7532	(SC56*TX7000)-F	RIL_99	W	P		20	35		55		67		82			85		
2	7	**34**	**4**	8	109	W	121	1	09CS7554	09CS7554	(SC56*TX7000)-F	RIL_121	W	P		18	37		56		60		67	80		61	79	
2	7	**34**	**4**	9	109	E	121	1	09CS7554	09CS7554	(SC56*TX7000)-F	RIL_121	W	P		19	35		53		63		68	80		63	80	
2	7	**34**	**5**	10	102	W	114	1	09CS7547	09CS7547	(SC56*TX7000)-F	RIL_114	W	P		17	36		54		65		73	86		73	98	
2	7	**34**	**5**	11	102	E	114	1	09CS7547	09CS7547	(SC56*TX7000)-F	RIL_114	W	P		18	41		55		63		70	90		72	96	
2	7	**34**	**6**	12	31	W	39	1	10CS10787	09CS7472	(SC56*TX7000)-F	RIL_39	W	P		19	37		53		72		82			82	106	
2	7	**34**	**6**	13	31	E	39	1	10CS10787	09CS7472	(SC56*TX7000)-F	RIL_39	W	P		19	37		51		73		83			85	113	
2	7	**34**	**7**	14	114	W	126	1	09CS7559	09CS7559	(SC56*TX7000)-F	RIL_126	W	P		16	35		51		65		72			67	94	
2	7	**34**	**7**	15	114	E	126	1	09CS7559	09CS7559	(SC56*TX7000)-F	RIL_126	W	P		13	24		40		61		71			68	95	
		34		16	border							border																
		35		1	border							border																
2	8	**35**	**1**	2	91	W	103	1	09CS7536	09CS7536	(SC56*TX7000)-F	RIL_103	R	P		17	36		54		70		88			80		
2	8	**35**	**1**	3	91	E	103	1	09CS7536	09CS7536	(SC56*TX7000)-F	RIL_103	R	P		20	37		53		72		89			82		
2	8	**35**	**2**	4	59	W	71	3	09CS7504	09CS7504	(SC56*TX7000)-F	RIL_71	R	P		16	28		50		65		80			85		
2	8	**35**	**2**	5	59	E	71	3	09CS7504	09CS7504	(SC56*TX7000)-F	RIL_71	R	P		17	29		48		63		79			83		
2	8	**35**	**3**	6	70	W	82	1	09CS7515	09CS7515	(SC56*TX7000)-F	RIL_82	R	P		15	32		46		51		60	73		62	77	
2	8	**35**	**3**	7	70	E	82	1	09CS7515	09CS7515	(SC56*TX7000)-F	RIL_82	R	P		16	22		46		60		67	81		66	88	
2	8	**35**	**4**	8	89	W	101	3	09CS7534	09CS7534	(SC56*TX7000)-F	RIL_101	R	P	Sep21 off-type plants removed	15	31		51		70		65			64	91	
2	8	**35**	**4**	9	89	E	101	3	09CS7534	09CS7534	(SC56*TX7000)-F	RIL_101	R	P	Sep21 off-type plants removed	15	31		50		59		70			62	91	
2	8	**35**	**5**	10	18	W	25	1	09CS7458	09CS7458	(SC56*TX7000)-F	RIL_25	R	P		15	32	variable	45		56		56			55	60	
2	8	**35**	**5**	11	18	E	25	1	09CS7458	09CS7458	(SC56*TX7000)-F	RIL_25	R	P		15	36	variable	49		60		63			59	81	
2	8	**35**	**6**	12	148	W	163	1	09CS7596	09CS7596	(SC56*TX7000)-F	RIL_163	R	P		16	32		50		68		75			70	82	
2	8	**35**	**6**	13	148	E	163	1	09CS7596	09CS7596	(SC56*TX7000)-F	RIL_163	R	P		14	35		51		68		73			72	88	
2	8	**35**	**7**	14	11	W	17	3	09CS7450		(SC56*TX7000)-F	RIL_17	R	P	Sep21 off-type plants removed	17	35		69		67/109		66			65	89	
2	8	**35**	**7**	15	11	E	17	3	09CS7450		(SC56*TX7000)-F	RIL_17	R	P	Sep21 off-type plants removed	18	40		68		72/130		72			73	96	
		35		16	border							border																
		36		1	border							border																
2	9	**36**	**1**	2	54	W	65	3	09CS7498	09CS7498	(SC56*TX7000)-F	RIL_65	R	P	Sep21 single off-type plant removed	16	32		55		67		78			74		
2	9	**36**	**1**	3	54	E	65	3	09CS7498	09CS7498	(SC56*TX7000)-F	RIL_65	R	P	Sep21 single off-type plant removed	17	33		52		71		80			73		
2	9	**36**	**2**	4	113	W	125	1	09CS7558	09CS7558	(SC56*TX7000)-F	RIL_125	W	P		15	26		49		66		70			68	71	
2	9	**36**	**2**	5	113	E	125	1	09CS7558	09CS7558	(SC56*TX7000)-F	RIL_125	W	P		14	28		45		63		68			66	82	
2	9	**36**	**3**	6	4	W	9	3	09CS7442	10CS10756	(SC56*TX7000)-F	RIL_9	W	P		17	36		59		71		95			86		
2	9	**36**	**3**	7	4	E	9	3	09CS7442	10CS10756	(SC56*TX7000)-F	RIL_9	W	P		18	37		63		79		95			87		
2	9	**36**	**4**	8	136	W	150	3	09CS7583	10CS10906	(SC56*TX7000)-F	RIL_150	R	P	Sep21 off-type plants removed	17	37		51		67		72	80		67	84	
2	9	**36**	**4**	9	136	E	150	3	09CS7583	10CS10906	(SC56*TX7000)-F	RIL_150	R	P	Sep21 off-type plants removed	20	45		66		69/106		78	108		76	121	
2	9	**36**	**5**	10	126	W	139	1	09CS7572	09CS7572	(SC56*TX7000)-F	RIL_139	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	14	27		44		53		52			51	83	
2	9	**36**	**5**	11	126	E	139	1	09CS7572	09CS7572	(SC56*TX7000)-F	RIL_139	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	14	31		45		57		55			55	82	
2	9	**36**	**6**	12	42	W	51	1	09CS7484	09CS7484	(SC56*TX7000)-F	RIL_51	R	P		17	38		58		70		79			75	79	
2	9	**36**	**6**	13	42	E	51	1	09CS7484	09CS7484	(SC56*TX7000)-F	RIL_51	R	P		18	37		60		74		81			83	87	
2	9	**36**	**7**	14	145	W	160	1	09CS7593	09CS7593	(SC56*TX7000)-F	RIL_160	W	P		17	35		54		65		81			77	104	
2	9	**36**	**7**	15	145	E	160	1	09CS7593	09CS7593	(SC56*TX7000)-F	RIL_160	W	P		18	31		52		65		74			81	105	
		36		16	border							border																
		37		1	border							border																
2	10	**37**	**1**	2	38	W	47	1	09CS7480	09CS7480	(SC56*TX7000)-F	RIL_47	R	P		16	32		48		64		77			75		
2	10	**37**	**1**	3	38	E	47	1	09CS7480	09CS7480	(SC56*TX7000)-F	RIL_47	R	P		17	33		48		62		75			73		
2	10	**37**	**2**	4	144	W	159	1	09CS7592	09CS7592	(SC56*TX7000)-F	RIL_159	R	P		15	27		44		51		63			58	64	
2	10	**37**	**2**	5	144	E	159	1	09CS7592	09CS7592	(SC56*TX7000)-F	RIL_159	R	P		15	29		45		55		64			64	69	
2	10	**37**	**3**	6	127	W	140	1	09CS7573	09CS7573	(SC56*TX7000)-F	RIL_140	R	P		20	34		51		64/82		69			70	91	
2	10	**37**	**3**	7	127	E	140	1	09CS7573	09CS7573	(SC56*TX7000)-F	RIL_140	R	P		20	36		54		63		70			70	80	
2	10	**37**	**4**	8	85	W	97	1	09CS7530	09CS7530	(SC56*TX7000)-F	RIL_97	W	P		19	35		55		64		77			84		
2	10	**37**	**4**	9	85	E	97	1	09CS7530	09CS7530	(SC56*TX7000)-F	RIL_97	W	P		20	34		57		73		82			83		
2	10	**37**	**5**	10	124	W	136	1	09CS7569	09CS7569	(SC56*TX7000)-F	RIL_136	W	P		19	34		49		59		79			65	85	
2	10	**37**	**5**	11	124	E	136	1	09CS7569	09CS7569	(SC56*TX7000)-F	RIL_136	W	P		18	32		49		61		78			69	91	
2	10	**37**	**6**	12	44	W	54	1	09CS7487	09CS7487	(SC56*TX7000)-F	RIL_54	W	P		20	40		57		63		73			72	90	
2	10	**37**	**6**	13	44	E	54	1	09CS7487	09CS7487	(SC56*TX7000)-F	RIL_54	W	P		19	37		57		63		72			70	90	
2	10	**37**	**7**	14	111	W	123	1	09CS7556	09CS7556	(SC56*TX7000)-F	RIL_123	R	P		18	35		53		64		66	89		69	92	
2	10	**37**	**7**	15	111	E	123	1	09CS7556	09CS7556	(SC56*TX7000)-F	RIL_123	R	P		17	34		55		60		65	82		68	94	
		37		16	border							border																
		38		1	border							border																
2	11	**38**	**1**	2	146	W	161	1	09CS7594	09CS7594	(SC56*TX7000)-F	RIL_161	R	P	Sep21 single off-type plant removed	13	30		49		66		77			75	103	
2	11	**38**	**1**	3	146	E	161	1	09CS7594	09CS7594	(SC56*TX7000)-F	RIL_161	R	P	Sep21 single off-type plant removed	16	34		54		73		86			85	111	
2	11	**38**	**2**	4	83	W	95	1	09CS7528	09CS7528	(SC56*TX7000)-F	RIL_95	R	P		16	28		49		59		70			62	69	
2	11	**38**	**2**	5	83	E	95	1	09CS7528	09CS7528	(SC56*TX7000)-F	RIL_95	R	P		15	28		50		62		75			66	85	
2	11	**38**	**3**	6	122	W	134	1	09CS7567	09CS7567	(SC56*TX7000)-F	RIL_134	R	P		17	32		48		67		73			74	101	
2	11	**38**	**3**	7	122	E	134	1	09CS7567	09CS7567	(SC56*TX7000)-F	RIL_134	R	P		23	40		64		74		81	104		85	110	
2	11	**38**	**4**	8	50	W	61	3	09CS7494	09CS7494	(SC56*TX7000)-F	RIL_61	R	P		15	31		47		63		86			83		
2	11	**38**	**4**	9	50	E	61	3	09CS7494	09CS7494	(SC56*TX7000)-F	RIL_61	R	P		15	31		49		65		83			85		
2	11	**38**	**5**	10	173	W					CHECK HYBRID	Great Scott				22	47		62		81		115			128		
2	11	**38**	**5**	11	173	E					CHECK HYBRID	Great Scott				22	43		64		83		114			133		
2	11	**38**	**6**	12	165	W	182	1	09CS7615	09CS7615	(SC56*TX7000)-F	RIL_182	R	P		21	37		48		72		74	90		77	122	
2	11	**38**	**6**	13	165	E	182	1	09CS7615	09CS7615	(SC56*TX7000)-F	RIL_182	R	P		19	35		51		70		74	94		74	114	
2	11	**38**	**7**	14	99	W	111	1	09CS7544	09CS7544	(SC56*TX7000)-F	RIL_111	R	P		16	33		52		64		74			73	99	
2	11	**38**	**7**	15	99	E	111	1	09CS7544	09CS7544	(SC56*TX7000)-F	RIL_111	R	P		14	25		47		61		68			74		
		38		16	border							border																
		39		1	border							border																
2	12	**39**	**1**	2	106	W	118	1	09CS7551	09CS7551	(SC56*TX7000)-F	RIL_118	W	P		16	29		51		56		65			64	79	
2	12	**39**	**1**	3	106	E	118	1	09CS7551	09CS7551	(SC56*TX7000)-F	RIL_118	W	P		17	33		52		57		65			63	72	
2	12	**39**	**2**	4	135	W	149	1	09CS7582	09CS7582	(SC56*TX7000)-F	RIL_149	W	P		14	27		53		60		72			69	71	
2	12	**39**	**2**	5	135	E	149	1	09CS7582	09CS7582	(SC56*TX7000)-F	RIL_149	W	P		12	22		45		57		69			64	74	
2	12	**39**	**3**	6	56	W	67	3	09CS7500	10CS10818	(SC56*TX7000)-F	RIL_67	W	P		13	28		58		64		76			77		
2	12	**39**	**3**	7	56	E	67	3	09CS7500	10CS10818	(SC56*TX7000)-F	RIL_67	W	P		14	33		50		65		79			77		
2	12	**39**	**4**	8	8	W	13	1	09CS7446	09CS7446	(SC56*TX7000)-F	RIL_13	R	P		17	32		42		57		77			85		
2	12	**39**	**4**	9	8	E	13	1	09CS7446	09CS7446	(SC56*TX7000)-F	RIL_13	R	P		17	35		50		62		83			86		
2	12	**39**	**5**	10	32	W	40	1	09CS7473	09CS7473	(SC56*TX7000)-F	RIL_40	W	P		21	43		64		69		75	93		68	91	
2	12	**39**	**5**	11	32	E	40	1	09CS7473	09CS7473	(SC56*TX7000)-F	RIL_40	W	P		22	45		63		67		69	98		65	95	
2	12	**39**	**6**	12	169	W	187	1	09CS7620	09CS7620	(SC56*TX7000)-F	RIL_187	W	P		16	33		56		66		75			72	88	
2	12	**39**	**6**	13	169	E	187	1	09CS7620	09CS7620	(SC56*TX7000)-F	RIL_187	W	P		14	30		52		60		70			75	92	
2	12	**39**	**7**	14	30	W	38	1	10CS10786	09CS7471	(SC56*TX7000)-F	RIL_38	W	P		14	31		52		67		80			79		
2	12	**39**	**7**	15	30	E	38	1	10CS10786	09CS7471	(SC56*TX7000)-F	RIL_38	W	P		11	28		48		63		74			77		
		39		16	border							border																
		40		1	border							border																
2	13	**40**	**1**	2	131	W	145	1	09CS7578	09CS7578	(SC56*TX7000)-F	RIL_145	RW	P		10	20		44		58		74			75		
2	13	**40**	**1**	3	131	E	145	1	09CS7578	09CS7578	(SC56*TX7000)-F	RIL_145	RW	P		12	26		44		61		76			77		
2	13	**40**	**2**	4	58	W	70	3	09CS7503	09CS7503	(SC56*TX7000)-F	RIL_70	W	P		19	37		61		66		69	92		66	87	
2	13	**40**	**2**	5	58	E	70	3	09CS7503	09CS7503	(SC56*TX7000)-F	RIL_70	W	P		20	38		67		66		65			67	82	
2	13	**40**	**3**	6	21	W	28	1	09CS7461	09CS7461	(SC56*TX7000)-F	RIL_28	R	P		17	38		57		68		86			77		
2	13	**40**	**3**	7	21	E	28	1	09CS7461	09CS7461	(SC56*TX7000)-F	RIL_28	R	P		17	34		54		70		87			76		
2	13	**40**	**4**	8	157	W	173	1	09CS7606	09CS7606	(SC56*TX7000)-F	RIL_173	R	P		16	32		57		68		88			103	120	
2	13	**40**	**4**	9	157	E	173	1	09CS7606	09CS7606	(SC56*TX7000)-F	RIL_173	R	P		18	35	variable	54		71		90			107	122	
2	13	**40**	**5**	10	150	W	165	1	09CS7598	09CS7598	(SC56*TX7000)-F	RIL_165	W	P		22	41		54		71		93			82		
2	13	**40**	**5**	11	150	E	165	1	09CS7598	09CS7598	(SC56*TX7000)-F	RIL_165	W	P		22	42		56		73		92			86		
2	13	**40**	**6**	12	86	W	98	1	09CS7531	09CS7531	(SC56*TX7000)-F	RIL_98	W	P		19	36		55		72		88			75	91	
2	13	**40**	**6**	13	86	E	98	1	09CS7531	09CS7531	(SC56*TX7000)-F	RIL_98	W	P		18	37		57		77		89			78	117	
2	13	**40**	**7**	14	67	W	79	1	09CS7512	09CS7512	(SC56*TX7000)-F	RIL_79	R	P		19	42		59		63		69			67	95	
2	13	**40**	**7**	15	67	E	79	1	09CS7512	09CS7512	(SC56*TX7000)-F	RIL_79	R	P		19	38		52		64		65			64	92	
		40		16	border							border																
		41		1	border							border																
2	14	**41**	**1**	2	52	W	63	1	09CS7496	09CS7496	(SC56*TX7000)-F	RIL_63	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	10	16		34		40		52			73		
2	14	**41**	**1**	3	52	E	63	1	09CS7496	09CS7496	(SC56*TX7000)-F	RIL_63	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	22		35		42		62			88		
2	14	**41**	**2**	4	159	W	176	3	09CS7609	10CS10933	(SC56*TX7000)-F	RIL_176	RW	P	Sep21 off-type plants removed	17	32		55		74/100		83			85		
2	14	**41**	**2**	5	159	E	176	3	09CS7609	10CS10933	(SC56*TX7000)-F	RIL_176	RW	P	Sep21 off-type plants removed	14	29		44		68		80			84	92	
2	14	**41**	**3**	6	140	W	154	3	09CS7587	10CS10910	(SC56*TX7000)-F	RIL_154	W	P		12	23		36		62		76			91		
2	14	**41**	**3**	7	140	E	154	3	09CS7587	10CS10910	(SC56*TX7000)-F	RIL_154	W	P		11	23		47		63		78			90		
2	14	**41**	**4**	8	137	W	151	1	09CS7584	09CS7584	(SC56*TX7000)-F	RIL_151	W	P		16	29		51		67		73			78	92	
2	14	**41**	**4**	9	137	E	151	1	09CS7584	09CS7584	(SC56*TX7000)-F	RIL_151	W	P		15	31		48		63		76			74	78	
2	14	**41**	**5**	10	97	W	109	1	09CS7542	09CS7542	(SC56*TX7000)-F	RIL_109	W	P		18	35		55		68		84			81		
2	14	**41**	**5**	11	97	E	109	1	09CS7542	09CS7542	(SC56*TX7000)-F	RIL_109	W	P		18	33		58		67		81			78		
2	14	**41**	**6**	12	28	W	36	3	09CS7469	09CS7469	(SC56*TX7000)-F	RIL_36	R	P		14	29		51		60		81			74		
2	14	**41**	**6**	13	28	E	36	3	09CS7469	09CS7469	(SC56*TX7000)-F	RIL_36	R	P		14	31		48		61		85			77		
2	14	**41**	**7**	14	49	W	60	1	09CS7493	09CS7493	(SC56*TX7000)-F	RIL_60	W	P		15	31		48		65		77			77		
2	14	**41**	**7**	15	49	E	60	1	09CS7493	09CS7493	(SC56*TX7000)-F	RIL_60	W	P		16	33		48		65		75			81		
		41		16	border							border																
		42		1	border							border																
2	15	**42**	**1**	2	115	W	127	3	09CS7560	09CS7560	(SC56*TX7000)-F	RIL_127	W	P	Sep21 off-type plants removed	15	31		52		68/100		80			84		
2	15	**42**	**1**	3	115	E	127	3	09CS7560	09CS7560	(SC56*TX7000)-F	RIL_127	W	P	Sep21 off-type plants removed	18	40		52	one plnt 83 cm	70/130		87			82	108	
2	15	**42**	**2**	4	138	W	152	1	09CS7585	09CS7585	(SC56*TX7000)-F	RIL_152	W	P		16	33		54		65		76	92		83	105	
2	15	**42**	**2**	5	138	E	152	1	09CS7585	09CS7585	(SC56*TX7000)-F	RIL_152	W	P		17	32		54		57		70	91		78	109	
2	15	**42**	**3**	6	149	W	164	3	09CS7597		(SC56*TX7000)-F	RIL_164	RW	P		12	24		44		51		67			64	70	
2	15	**42**	**3**	7	149	E	164	3	09CS7597		(SC56*TX7000)-F	RIL_164	RW	P		16	29		49		58		65			66	78	
2	15	**42**	**4**	8	147	W	162	1	09CS7595	09CS7595	(SC56*TX7000)-F	RIL_162	R	P		12	24		42		53		59			58	88	
2	15	**42**	**4**	9	147	E	162	1	09CS7595	09CS7595	(SC56*TX7000)-F	RIL_162	R	P		12	22		41		54		61			62	78	
2	15	**42**	**5**	10	27	W	35	3	09CS7468	09CS7468	(SC56*TX7000)-F	RIL_35	R	P		14	27		53		66		84			85		
2	15	**42**	**5**	11	27	E	35	3	09CS7468	09CS7468	(SC56*TX7000)-F	RIL_35	R	P		15	32		54		68		85			83		
2	15	**42**	**6**	12	15	W	21	1	09CS7454	09CS7454	(SC56*TX7000)-F	RIL_21	W	P		11	20		43		59		66			71		
2	15	**42**	**6**	13	15	E	21	1	09CS7454	09CS7454	(SC56*TX7000)-F	RIL_21	W	P		12	23		40		56		64			70		
2	15	**42**	**7**	14	13	W	19	1	09CS7452	09CS7452	(SC56*TX7000)-F	RIL_19	R	P		18	36		55		68		73			70	93	
2	15	**42**	**7**	15	13	E	19	1	09CS7452	09CS7452	(SC56*TX7000)-F	RIL_19	R	P		16	32		53		65		72			65	84	
		42		16	border							border																
		43		1	border							border																
2	16	**43**	**1**	2	78	W	90	3	09CS7523		(SC56*TX7000)-F	RIL_90	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	16	27		48		67		79			82		
2	16	**43**	**1**	3	78	E	90	3	09CS7523		(SC56*TX7000)-F	RIL_90	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	7	18		37		54		67			68		
2	16	**43**	**2**	4	103	W	115	1	09CS7548	09CS7548	(SC56*TX7000)-F	RIL_115	W	P		11	15		37		54		69			74		

rep	D_small_block	Range	D_row	two_ROW_PLOT_NUMBER	MAC_ENTRY	West/East_subplot_Data_Row	TAM_Entry	TAM_Code	TAM_Source1	TAM_Source2	TAM_Pedigree	Genotype	Sd	Pl	Plot_status_PlantRemoval	Plant_ht_Aug24_cm	Plant_ht_Aug31_cm	comments	Plant_ht_Sep8_cm	comments_Sep8	Plant_ht_Sep15_cm	comments_Sep15	Plant_ht_Sep22_cm	Panicle_ht_Sep22_cm	comments	Plant_ht_Sep29_cm	Panicle_ht_Sep29_cm	comments
2	16	**43**	**2**	5	103	E	115	1	09CS7548	09CS7548	(SC56*TX7000)-F	RIL_115	W	P		9	20		36		55		71			71		
2	16	**43**	**3**	6	72	W	84	1	09CS7517	09CS7517	(SC56*TX7000)-F	RIL_84	R	P		14	34	variable	52		70		80			85		
2	16	**43**	**3**	7	72	E	84	1	09CS7517	09CS7517	(SC56*TX7000)-F	RIL_84	R	P		14	30	variable	50		53		65			81		
2	16	**43**	**4**	8	125	W	138	1	09CS7571	09CS7571	(SC56*TX7000)-F	RIL_138	RW	P		11	23		46		66		74			77	89	
2	16	**43**	**4**	9	125	E	138	1	09CS7571	09CS7571	(SC56*TX7000)-F	RIL_138	RW	P		13	28		42		62		73			75	85	
2	16	**43**	**5**	10	75	W	87	1	09CS7520	09CS7520	(SC56*TX7000)-F	RIL_87	W	P		16	29		54		63		71			68	85	
2	16	**43**	**5**	11	75	E	87	1	09CS7520	09CS7520	(SC56*TX7000)-F	RIL_87	W	P		18	32		56		67		71			69	83	
2	16	**43**	**6**	12	37	W	46	1	09CS7479	09CS7479	(SC56*TX7000)-F	RIL_46	RW	P		16	29		53		62		72			66		
2	16	**43**	**6**	13	37	E	46	1	09CS7479	09CS7479	(SC56*TX7000)-F	RIL_46	RW	P		17	32		57		65		74			69		
2	16	**43**	**7**	14	80	W	92	1	09CS7525	09CS7525	(SC56*TX7000)-F	RIL_92	RW	P		21	39		56		77		85			77	100	
2	16	**43**	**7**	15	80	E	92	1	09CS7525	09CS7525	(SC56*TX7000)-F	RIL_92	RW	P		19	39		54		76		82			74	93	
		43		16	border							border																
		44		1	border							border																
2	17	**44**	**1**	2	45	W	55	1	09CS7488	09CS7488	(SC56*TX7000)-F	RIL_55	R	P		10	20		35		55		65			63		
2	17	**44**	**1**	3	45	E	55	1	09CS7488	09CS7488	(SC56*TX7000)-F	RIL_55	R	P		17	35		53		66		75			68	78	
2	17	**44**	**2**	4	156	W	172	1	09CS7605	09CS7605	(SC56*TX7000)-F	RIL_172	W	P		16	30		43		63		69			77	108	
2	17	**44**	**2**	5	156	E	172	1	09CS7605	09CS7605	(SC56*TX7000)-F	RIL_172	W	P		16	29		44		67		72			77	101	
2	17	**44**	**3**	6	29	W	37	1	10CS10785	09CS7470	(SC56*TX7000)-F	RIL_37	W	P		14	30		47		67		80			79		
2	17	**44**	**3**	7	29	E	37	1	10CS10785	09CS7470	(SC56*TX7000)-F	RIL_37	W	P		15	31		48		68		84			82		
2	17	**44**	**4**	8	121	W	133	1	09CS7566	09CS7566	(SC56*TX7000)-F	RIL_133	W	P		14	24		48		63		77			83		
2	17	**44**	**4**	9	121	E	133	1	09CS7566	09CS7566	(SC56*TX7000)-F	RIL_133	W	P		17	32		49		67		74			86		
2	17	**44**	**5**	10	81	W	93	1	09CS7526	09CS7526	(SC56*TX7000)-F	RIL_93	RW	P		18	40		62		81		84			79	95	
2	17	**44**	**5**	11	81	E	93	1	09CS7526	09CS7526	(SC56*TX7000)-F	RIL_93	RW	P		24	47		68		79		82			81	113	
2	17	**44**	**6**	12	151	W	166	1	09CS7599	09CS7599	(SC56*TX7000)-F	RIL_166	W	P		18	38		51		73		72			81	98	
2	17	**44**	**6**	13	151	E	166	1	09CS7599	09CS7599	(SC56*TX7000)-F	RIL_166	W	P		15	35		46		65		73			82	91	
2	17	**44**	**7**	14	112	W	124	1	09CS7557	09CS7557	(SC56*TX7000)-F	RIL_124	R	P		15	31		47		63		73			70		
2	17	**44**	**7**	15	112	E	124	1	09CS7557	09CS7557	(SC56*TX7000)-F	RIL_124	R	P		15	25		41		61		74			72		
		44		16	border							border																
		45		1	border							border																
2	18	**45**	**1**	2	104	W	116	1	09CS7549	09CS7549	(SC56*TX7000)-F	RIL_116	W	P		20	39		59		77		84			87	100	
2	18	**45**	**1**	3	104	E	116	1	09CS7549	09CS7549	(SC56*TX7000)-F	RIL_116	W	P		20	37		60		78		91			93	113	
2	18	**45**	**2**	4	19	W	26	1	09CS7459	09CS7459	(SC56*TX7000)-F	RIL_26	W	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	23		40		44		52			49	60	
2	18	**45**	**2**	5	19	E	26	1	09CS7459	09CS7459	(SC56*TX7000)-F	RIL_26	W	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	12	27		40		42		50			50	53	
2	18	**45**	**3**	6	65	W	77	3	09CS7510	09CS7510	(SC56*TX7000)-F	RIL_77	R	P		10	20		37		51		58			58		
2	18	**45**	**3**	7	65	E	77	3	09CS7510	09CS7510	(SC56*TX7000)-F	RIL_77	R	P		14	29		48		58		71			68	88	
2	18	**45**	**4**	8	60	W	72	1	09CS7505	09CS7505	(SC56*TX7000)-F	RIL_72	R	P		19	36		56		67		67			75	110	
2	18	**45**	**4**	9	60	E	72	1	09CS7505	09CS7505	(SC56*TX7000)-F	RIL_72	R	P		18	32		54		62		72			72	106	
2	18	**45**	**5**	10	154	W	170	1	09CS7603	09CS7603	(SC56*TX7000)-F	RIL_170	W	P		18	36		53		63		74			70		
2	18	**45**	**5**	11	154	E	170	1	09CS7603	09CS7603	(SC56*TX7000)-F	RIL_170	W	P		18	38		52		66		73			72		
2	18	**45**	**6**	12	20	W	27	1	09CS7460	09CS7460	(SC56*TX7000)-F	RIL_27	W	P		17	32		49		68		73			72		
2	18	**45**	**6**	13	20	E	27	1	09CS7460	09CS7460	(SC56*TX7000)-F	RIL_27	W	P		16	34		56		70		73			75	100	
2	18	**45**	**7**	14	79	W	91	1	09CS7524	09CS7524	(SC56*TX7000)-F	RIL_91	W	P		14	27		46		56		60			63		
2	18	**45**	**7**	15	79	E	91	1	09CS7524	09CS7524	(SC56*TX7000)-F	RIL_91	W	P		12	22		40		47		53			53		
		45		16	border							border																
		46		1	border							border																
2	19	**46**	**1**	2	12	W	18	1	09CS7451	09CS7451	(SC56*TX7000)-F	RIL_18	R	P		14	33		53		72		84			80		
2	19	**46**	**1**	3	12	E	18	1	09CS7451	09CS7451	(SC56*TX7000)-F	RIL_18	R	P		20	41		58		75		87			84		
2	19	**46**	**2**	4	39	W	48	3	09CS7481	09CS7481	(SC56*TX7000)-F	RIL_48	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	10	14		35		50		55			65		
2	19	**46**	**2**	5	39	E	48	3	09CS7481	09CS7481	(SC56*TX7000)-F	RIL_48	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	8	13		22		36		36			56		
2	19	**46**	**3**	6	133	W	147	1	09CS7580	09CS7580	(SC56*TX7000)-F	RIL_147	R	P		15	34		53		67		88			90		
2	19	**46**	**3**	7	133	E	147	1	09CS7580	09CS7580	(SC56*TX7000)-F	RIL_147	R	P		18	36		53		74		96			103		
2	19	**46**	**4**	8	168	W	186	1	09CS7619	09CS7619	(SC56*TX7000)-F	RIL_186	W	P		17	34		48		65		76			75	103	
2	19	**46**	**4**	9	168	E	186	1	09CS7619	09CS7619	(SC56*TX7000)-F	RIL_186	W	P		18	33		51		61		70			74	100	
2	19	**46**	**5**	10	14	W	20	1	09CS7453	09CS7453	(SC56*TX7000)-F	RIL_20	R	P		16	28		52		64		79			77		
2	19	**46**	**5**	11	14	E	20	1	09CS7453	09CS7453	(SC56*TX7000)-F	RIL_20	R	P		15	31		48		62		77			78		
2	19	**46**	**6**	12	66	W	78	3	09CS7511		(SC56*TX7000)-F	RIL_78	W	P	Sep21 single off-type plant removed	16	34		45		61		69			70	100	
2	19	**46**	**6**	13	66	E	78	3	09CS7511		(SC56*TX7000)-F	RIL_78	W	P	Sep21 single off-type plant removed	12	28		43		60		63			71	89	
2	19	**46**	**7**	14	139	W	153	1	09CS7586	09CS7586	(SC56*TX7000)-F	RIL_153	R	P		13	25		44		49		50			50	56	
2	19	**46**	**7**	15	139	E	153	1	09CS7586	09CS7586	(SC56*TX7000)-F	RIL_153	R	P		8	19		40		38		46			47		
		46		16	border							border																
		47		1	border							border																
2	20	**47**	**1**	2	7	W	12	3	09CS7445	10CS10759	(SC56*TX7000)-F	RIL_12	R	P	Sep21 single off-type plant removed	16	34		44		62		75			68	75	
2	20	**47**	**1**	3	7	E	12	3	09CS7445	10CS10759	(SC56*TX7000)-F	RIL_12	R	P	Sep21 single off-type plant removed	21	37		47		60		73			69	80	
2	20	**47**	**2**	4	163	W	180	1	09CS7613	09CS7613	(SC56*TX7000)-F	RIL_180	RW	P	Sep21 single off-type plant removed	19	36		58		62		79			79	108	
2	20	**47**	**2**	5	163	E	180	1	09CS7613	09CS7613	(SC56*TX7000)-F	RIL_180	RW	P	Sep21 single off-type plant removed	15	34		52		59		77			78		
2	20	**47**	**3**	6	62	W	74	1	09CS7507	09CS7507	(SC56*TX7000)-F	RIL_74	W	P		12	21		41		54		64			66	84	
2	20	**47**	**3**	7	62	E	74	1	09CS7507	09CS7507	(SC56*TX7000)-F	RIL_74	W	P		19	29		46		59		73			71	95	
2	20	**47**	**4**	8	142	W	157	1	09CS7590	09CS7590	(SC56*TX7000)-F	RIL_157	W	P		17	35		50		71		85			91		
2	20	**47**	**4**	9	142	E	157	1	09CS7590	09CS7590	(SC56*TX7000)-F	RIL_157	W	P		16	36		52		72		89			92		
2	20	**47**	**5**	10	129	W	143	1	09CS7576	09CS7576	(SC56*TX7000)-F	RIL_143	W	P		21	39		58		77		88			87	98	
2	20	**47**	**5**	11	129	E	143	1	09CS7576	09CS7576	(SC56*TX7000)-F	RIL_143	W	P		17	34		56		74		82			83	90	
2	20	**47**	**6**	12	25	W	32	1	09CS7465	09CS7465	(SC56*TX7000)-F	RIL_32	W	P		14	30		44		61		74			80	92	
2	20	**47**	**6**	13	25	E	32	1	09CS7465	09CS7465	(SC56*TX7000)-F	RIL_32	W	P		14	27		47		63		75			80	98	
2	20	**47**	**7**	14	118	W	130	1	09CS7563	09CS7563	(SC56*TX7000)-F	RIL_130	W	P		14	32		42		53		58			59	77	
2	20	**47**	**7**	15	118	E	130	1	09CS7563	09CS7563	(SC56*TX7000)-F	RIL_130	W	P		15	32		38		54		59			57	79	
		47		16	border							border																
		48		1	border							border																
2	21	**48**	**1**	2	40	W	49	1	09CS7482	09CS7482	(SC56*TX7000)-F	RIL_49	R	P		16	36		58		74		81			77	100	
2	21	**48**	**1**	3	40	E	49	1	09CS7482	09CS7482	(SC56*TX7000)-F	RIL_49	R	P		18	40		60		72		78			76	105	
2	21	**48**	**2**	4	57	W	69	1	09CS7502	09CS7502	(SC56*TX7000)-F	RIL_69	RW	P		19	34		50		72		87			87	111	
2	21	**48**	**2**	5	57	E	69	1	09CS7502	09CS7502	(SC56*TX7000)-F	RIL_69	RW	P		15	30		46		67		82			88	112	
2	21	**48**	**3**	6	88	W	100	1	09CS7533	09CS7533	(SC56*TX7000)-F	RIL_100	W	P	Sep21 single off-type plant removed	18	40		55		68		79			73	95	
2	21	**48**	**3**	7	88	E	100	1	09CS7533	09CS7533	(SC56*TX7000)-F	RIL_100	W	P	Sep21 single off-type plant removed	18	39		56		71		78			73	102	
2	21	**48**	**4**	8	3	W	4	1	10CS10751	10CS10751-1	(SC56*TX7000)-F	RIL_4	R	P		10	15		42		57		68			71		
2	21	**48**	**4**	9	3	E	4	1	10CS10751	10CS10751-1	(SC56*TX7000)-F	RIL_4	R	P		13	16		43		52		66			75		
2	21	**48**	**5**	10	167	W	185	1	09CS7618	09CS7618	(SC56*TX7000)-F	RIL_185	R	P		20	41		50		63		82			82		
2	21	**48**	**5**	11	167	E	185	1	09CS7618	09CS7618	(SC56*TX7000)-F	RIL_185	R	P		19	37		47		65		80			87		
2	21	**48**	**6**	12	171	W	189	1	09CS7622	09CS7622	(SC56*TX7000)-F	RIL_189	R	P		12	30		50		58		64			60	84	
2	21	**48**	**6**	13	171	E	189	1	09CS7622	09CS7622	(SC56*TX7000)-F	RIL_189	R	P		14	25		50		59		62			62	87	
2	21	**48**	**7**	14	17	W	23	1	09CS7456	09CS7456	(SC56*TX7000)-F	RIL_23	R	P		17	40		56		72		81			81		
2	21	**48**	**7**	15	17	E	23	1	09CS7456	09CS7456	(SC56*TX7000)-F	RIL_23	R	P		17	37		55		72		81			79		
		48		16	border							border																
		49		1	border							border																
2	22	**49**	**1**	2	23	W	30	1	09CS7463	09CS7463	(SC56*TX7000)-F	RIL_30	W	P		18	38		54		64		69	130		73	123	
2	22	**49**	**1**	3	23	E	30	1	09CS7463	09CS7463	(SC56*TX7000)-F	RIL_30	W	P		22	44		56		70		70	114		72	120	
2	22	**49**	**2**	4	1	W	1	1	10CS10748	10CS10748-1	(SC56*TX7000)-F	RIL_1	W	P		24	43		54		73		80			80	101	
2	22	**49**	**2**	5	1	E	1	1	10CS10748	10CS10748-1	(SC56*TX7000)-F	RIL_1	W	P		19	39		52		70		71			76	102	
2	22	**49**	**3**	6	10	W	16	1	09CS7449	09CS7449	(SC56*TX7000)-F	RIL_16	W	P		14	26		41		55		59	74		56	70	
2	22	**49**	**3**	7	10	E	16	1	09CS7449	09CS7449	(SC56*TX7000)-F	RIL_16	W	P		14	28		43		56		57	66		57	68	
2	22	**49**	**4**	8	132	W	146	1	09CS7579	09CS7579	(SC56*TX7000)-F	RIL_146	W	P		15	33	variable	57		72		92			86	100	
2	22	**49**	**4**	9	132	E	146	1	09CS7579	09CS7579	(SC56*TX7000)-F	RIL_146	W	P		11	26		46		66		87			84		
2	22	**49**	**5**	10	116	W	128	1	09CS7561	09CS7561	(SC56*TX7000)-F	RIL_128	R	P		18	41		60		75		88			93	103	
2	22	**49**	**5**	11	116	E	128	1	09CS7561	09CS7561	(SC56*TX7000)-F	RIL_128	R	P		20	39		62		78		89			95		
2	22	**49**	**6**	12	107	W	119	3	09CS7552	09CS7552	(SC56*TX7000)-F	RIL_119	R	P	Sep21 off-type plants removed	18	38		53		68/100	mixed	80			77	100	
2	22	**49**	**6**	13	107	E	119	3	09CS7552	09CS7552	(SC56*TX7000)-F	RIL_119	R	P	Sep21 off-type plants removed	19	40		58		82/120	mixed	80			82	103	
2	22	**49**	**7**	14	130	W	144	1	09CS7577	09CS7577	(SC56*TX7000)-F	RIL_144	W	P		14	30		50		64		73			69	84	
2	22	**49**	**7**	15	130	E	144	1	09CS7577	09CS7577	(SC56*TX7000)-F	RIL_144	W	P		15	30		51		63		69			68		
		49		16	border							border																
		50		1	border							border																
2	23	**50**	**1**	2	153	W	169	1	09CS7602	09CS7602	(SC56*TX7000)-F	RIL_169	RW	P		16	32		46		62		74			72		
2	23	**50**	**1**	3	153	E	169	1	09CS7602	09CS7602	(SC56*TX7000)-F	RIL_169	RW	P		17	35		52		65		74			77	98	
2	23	**50**	**2**	4	170	W	188	1	09CS7621	09CS7621	(SC56*TX7000)-F	RIL_188	W	P		14	32		55		65		71	83		69	94	
2	23	**50**	**2**	5	170	E	188	1	09CS7621	09CS7621	(SC56*TX7000)-F	RIL_188	W	P		15	30		57		65		74	91		72	103	
2	23	**50**	**3**	6	53	W	64	1	09CS7497	09CS7497	(SC56*TX7000)-F	RIL_64	R	P		20	34		44		59		68			70	102	
2	23	**50**	**3**	7	53	E	64	1	09CS7497	09CS7497	(SC56*TX7000)-F	RIL_64	R	P		18	31		46		62		70			72	104	
2	23	**50**	**4**	8	90	W	102	1	09CS7535	09CS7535	(SC56*TX7000)-F	RIL_102	R	P		20	41		54		65		77			75		
2	23	**50**	**4**	9	90	E	102	1	09CS7535	09CS7535	(SC56*TX7000)-F	RIL_102	R	P		19	34		44		63		76			77		
2	23	**50**	**5**	10	152	W	168	1	09CS7601	09CS7601	(SC56*TX7000)-F	RIL_168	W	P		19	34		56		68		66			80	116	
2	23	**50**	**5**	11	152	E	168	1	09CS7601	09CS7601	(SC56*TX7000)-F	RIL_168	W	P		18	34		55		63		71			79	114	
2	23	**50**	**6**	12	5	W	10	1	09CS7443	09CS7443	(SC56*TX7000)-F	RIL_10	RW	P		19	41		58		73		75			76	100	
2	23	**50**	**6**	13	5	E	10	1	09CS7443	09CS7443	(SC56*TX7000)-F	RIL_10	RW	P		19	39		61		72		77			78	92	
2	23	**50**	**7**	14	84	W	96	1	09CS7529	09CS7529	(SC56*TX7000)-F	RIL_96	R	P		16	38		51		71		74			73		
2	23	**50**	**7**	15	84	E	96	1	09CS7529	09CS7529	(SC56*TX7000)-F	RIL_96	R	P		16	31	variable	45		63		72			66		
		50		16	border							border																
		51		1	border							border																
2	24	**51**	**1**	2	61	W	73	1	09CS7506	09CS7506	(SC56*TX7000)-F	RIL_73	R	P		14	31		48		66		77			76		
2	24	**51**	**1**	3	61	E	73	1	09CS7506	09CS7506	(SC56*TX7000)-F	RIL_73	R	P		15	30		55		70		80			80		
2	24	**51**	**2**	4	166	W	183	3	09CS7616	09CS7616	(SC56*TX7000)-F	RIL_183	W	P		15	33		54		72		81			84		
2	24	**51**	**2**	5	166	E	183	3	09CS7616	09CS7616	(SC56*TX7000)-F	RIL_183	W	P		18	36		59		77		82			88		
2	24	**51**	**3**	6	2	W	3	1	10CS10750	10CS10750-1	(SC56*TX7000)-F	RIL_3	W	P		15	32		52		75		83			90	130	
2	24	**51**	**3**	7	2	E	3	1	10CS10750	10CS10750-1	(SC56*TX7000)-F	RIL_3	W	P		16	35		53		74		85			92	128	
2	24	**51**	**4**	8	36	W	45	3	09CS7478	10CS10794	(SC56*TX7000)-F	RIL_45	W	P		13	259		52		64		80			87		
2	24	**51**	**4**	9	36	E	45	3	09CS7478	10CS10794	(SC56*TX7000)-F	RIL_45	W	P		16	34		54		70		81			88		
2	24	**51**	**5**	10	92	W	104	1	09CS7537	09CS7537	(SC56*TX7000)-F	RIL_104	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	13	25		38		56		61			55		
2	24	**51**	**5**	11	92	E	104	1	09CS7537	09CS7537	(SC56*TX7000)-F	RIL_104	R	P	Aug 30-31 hand-planted forage line 700D-BMR to fill gaps	11	23		36		52		56			55		
2	24	**51**	**6**	12	63	W	75	1	09CS7508	09CS7508	(SC56*TX7000)-F	RIL_75	R	P		19	39		58		68		76			76	106	
2	24	**51**	**6**	13	63	E	75	1	09CS7508	09CS7508	(SC56*TX7000)-F	RIL_75	R	P		15	32		51		66		75			74	103	
2	24	**51**	**7**	14	98	W	110	1	09CS7543	09CS7543	(SC56*TX7000)-F	RIL_110	W	P		11	26		40		55		64			71	76	
2	24	**51**	**7**	15	98	E	110	1	09CS7543	09CS7543	(SC56*TX7000)-F	RIL_110	W	P		12	30		42		60		67			68	78	
		51		16	border							border																
		52		1	border							border																
2	25	**52**	**1**	2	22	W	29	1	09CS7462	09CS7462	(SC56*TX7000)-F	RIL_29	W	P		15	28		48		64		75			73	101	
2	25	**52**	**1**	3	22	E	29	1	09CS7462	09CS7462	(SC56*TX7000)-F	RIL_29	W	P		17	36		56		73		74			78	109	
2	25	**52**	**2**	4	77	W	89	1	09CS7522	09CS7522	(SC56*TX7000)-F	RIL_89	R	P		14	26		44		62		68			75	98	
2	25	**52**	**2**	5	77	E	89	1	09CS7522	09CS7522	(SC56*TX7000)-F	RIL_89	R	P		15	32		45		56		68			69	86	
2	25	**52**	**3**	6	51	W	62	1	09CS7495	09CS7495	(SC56*TX7000)-F	RIL_62	R	P		16	34		54		60		69			68	92	
2	25	**52**	**3**	7	51	E	62	1	09CS7495	09CS7495	(SC56*TX7000)-F	RIL_62	R	P		15	26		47		59		67			65	95	
2	25	**52**	**4**	8	123	W	135	1	09CS7568	09CS7568	(SC56*TX7000)-F	RIL_135	R	P		16	28		51		59		70			72		
2	25	**52**	**4**	9	123	E	135	1	09CS7568	09CS7568	(SC56*TX7000)-F	RIL_135	R	P		16	29		51		62		74			76		
2	25	**52**	**5**	10	134	W	148	1	09CS7581	09CS7581	(SC56*TX7000)-F	RIL_148	RW	P		17	30		57		71		92			91		
2	25	**52**	**5**	11	134	E	148	1	09CS7581	09CS7581	(SC56*TX7000)-F	RIL_148	RW	P		19	30		58		78		95			96		
2	25	**52**	**6**	12	26	W	33	1	09CS7466	09CS7466	(SC56*TX7000)-F	RIL_33	W	P		13	22		42		56		63			64		
2	25	**52**	**6**	13	26	E	33	1	09CS7466	09CS7466	(SC56*TX7000)-F	RIL_33	W	P		12	22		47		62		60			66		
2	25	**52**	**7**	14	41	W	50	1	09CS7483	09CS7483	(SC56*TX7000)-F	RIL_50	W	P		13	19		43		55		63			64		
2	25	**52**	**7**	15	41	E	50	1	09CS7483	09CS7483	(SC56*TX7000)-F	RIL_50	W	P		12	18		42		52		56			63		
		52		16	border							border																
		53		1	border							border																
		53	**1**	2	border	W						border				15	39		52		78		111			128		
		53	**1**	3	border	E						border				18	27		61		85		115			138		
		53	**2**	4	173	W						Great Scott				16	37		55		72		95			126		
		53	**2**	5	173	E						Great Scott				18	41		63		73		96			125		
		53	**3**	6	173	W						Great Scott				22	35		62		74		108			122		
		53	**3**	7	173	E						Great Scott				18	34		60		74		103			125		
		53	**4**	8	173	W						Great Scott				20	36		63		75		101			127		
		53	**4**	9	173	E						Great Scott				20	38		65		77		108			127		
		53	**5**	10	173	W						Great Scott				19	41		67		79		109			123		
		53	**5**	11	173	E						Great Scott				19	38		60		70		101			125		
		53	**6**	12	173	W						Great Scott				20	40		63		76		103			128		
		53	**6**	13	173	E						Great Scott				17	41		65		71		100			130		

rep	D_small_block	**Range**	**D_row**	two_ROW_PLOT_NUMBER	MAC_ENTRY	West/East_subplot_Data_Row	TAM_Entry	TAM_Code	TAM_Source1	TAM_Source2	TAM_Pedigree	Genotype	Sd	Pl	Plot_status_PlantRemoval	Plant_ht_Aug24_cm	Plant_ht_Aug31_cm	comments	Plant_ht_Sep8_cm	comments_Sep8	Plant_ht_Sep15_cm	comments_Sep15	Plant_ht_Sep22_cm	Panicle_ht_Sep22_cm	comments	Plant_ht_Sep29_cm	Panicle_ht_Sep29_cm	comments
		53	**7**	14	border	W						Border				10	23		53		76		112			135		
		53	**7**	15	border	E						Border				10	24		44		73		104			138		
		53		16	border							Border																
		54		1	border							Border																
		54	**1**	2	border							Border																
		54	**1**	3	border							Border																
		54	**2**	4	border							Border																
		54	**2**	5	border							Border																
		54	**3**	6	border							Border																
		54	**3**	7	border							Border																
		54	**4**	8	border							Border																
		54	**4**	9	border							Border																
		54	**5**	10	border							Border																
		54	**5**	11	border							Border																
		54	**6**	12	border							Border																
		54	**6**	13	border							Border																
		54	**7**	14	border							Border																
		54	**7**	15	border							Border																
v	v	**54**		16	border		v	v	v	v	v	Border	v	v														