

S. Table 1. The calculated plant height means and standard deviation (St.dev) from the mean for the Honeywell (HW), Pepperl+Fuchs (PF), MaxSonar (MS), db3 Pulsar (db3P), and manual measurements (MN) in 2016; and the Honeywell (HW), Pepperl+Fuchs (PF), LidarLite v3 (LLt), unmanned aerial system images (UAS), and SICK-LMS511 (LMS511) sensors in 2017 for each collection day (DOY).

2016				2017			
DOY	Sensor	Height (cm)	St.Dev	DOY	Sensor	Height (cm)	St.Dev
161	MS	8.74	0.60	146	HW	1.62	0.37
161	db3P	12.38	0.50	146	LLt	8.28	0.78
165	MN	11.28	1.19	146	PF	2.11	0.41
168	MS	5.82	0.92	159	HW	2.19	0.61
168	db3P	6.53	1.19	159	LLt	4.44	0.99
168	HW	4.59	1.10	159	PF	1.91	0.55
168	PF	5.04	1.28	170	HW	15.7	2.34
171	MN	16.19	1.41	170	LLt	16.36	0.48
178	MN	23.72	4.59	170	PF	16.6	2.04
182	MS	27.69	2.35	180	HW	24.65	2.09
182	db3P	30.62	3.93	180	LLt	28.28	3.2
182	HW	25.46	3.03	180	PF	26.27	2.58
182	PF	26.39	3.06	191	HW	40.37	2.52
188	MN	36.86	2.61	191	LLt	38.65	4.68
189	HW	34.76	3.55	191	LMS511	32.6	3.03
189	PF	35.55	3.91	191	PF	43.15	3.16
192	MN	43.37	3.71	191	UAS	32.04	2.43
199	MN	50.40	3.07	206	UAS	72.66	4.08
203	HW	51.74	3.48	212	HW	74.46	3.62
203	PF	53.74	3.74	212	LLt	76.41	9.98
206	MN	57.49	3.23	212	PF	77.39	5.36
217	MS	56.03	2.38	233	HW	100.38	6.85
217	db3P	64.66	5.20	233	LLt	95.34	9.11
217	HW	59.60	3.72	233	PF	107.06	10.38
217	PF	61.93	4.12	248	HW	86.83	9.2
238	MS	61.99	7.64	248	PF	94.95	14.82
238	db3P	78.27	10.74	305	UAS	82.46	9.82
238	HW	79.76	6.38				
238	PF	84.68	7.07				
259	HW	85.65	6.70				
259	PF	92.04	7.69				

S. Table 2. The calculated repeatability (r) and standard error (SE) for the Honeywell (HW), Pepperl+Fuchs (PF), MaxSonar (MS), db3 Pulsar (db3P), and manual measurements (MN) in 2016; and the Honeywell (HW), Pepperl+Fuchs (PF), LidarLite v3 (LLt), unmanned aerial system images (UAS), and SICK-LMS511 (LMS511) sensors in 2017 for each collection day (DOY).

2016				2017			
DOY	Sensor	Repeatability	SE	DOY	Sensor	Repeatability	SE
161	MS	0.098	0.253	146	HW	0.431	0.152
161	db3P	0.000	0.000	146	LLt	0.000	0.000
165	MN	0.485	0.243	146	PF	0.684	0.083
168	MS	0.000	0.000	159	HW	0.890	0.036
168	db3P	0.127	0.187	159	LLt	0.045	0.218
168	HW	0.828	0.063	159	PF	0.809	0.052
168	PF	0.859	0.050	170	HW	0.934	0.018
171	MN	0.639	0.117	170	LLt	0.000	0.000
178	MN	0.396	0.235	170	PF	0.944	0.015
182	MS	0.000	0.000	180	HW	0.722	0.076
182	db3P	0.000	0.000	180	LLt	0.146	0.245
182	HW	0.908	0.034	180	PF	0.931	0.019
182	PF	0.919	0.026	191	HW	0.704	0.081
188	MN	0.823	0.051	191	LLt	0.063	0.248
189	HW	0.735	0.107	191	LMS511	0.000	0.000
189	PF	0.762	0.094	191	PF	0.911	0.030
192	MN	0.708	0.083	191	UAS	0.731	0.073
199	MN	0.777	0.064	206	UAS	0.884	0.042
203	HW	0.823	0.056	212	HW	0.688	0.111
203	PF	0.831	0.053	212	LLt	0.058	0.281
206	MN	0.743	0.073	212	PF	0.893	0.038
217	MS	0.068	0.182	233	HW	0.849	0.041
217	db3P	0.052	0.267	233	LLt	0.031	0.156
217	HW	0.862	0.039	233	PF	0.963	0.010
217	PF	0.868	0.037	248	HW	0.888	0.037
238	MS	0.214	0.217	248	PF	0.952	0.017
238	HW	0.736	0.071	305	UAS	0.932	0.024
238	PF	0.758	0.065				
259	HW	0.603	0.101				
259	PF	0.624	0.097				

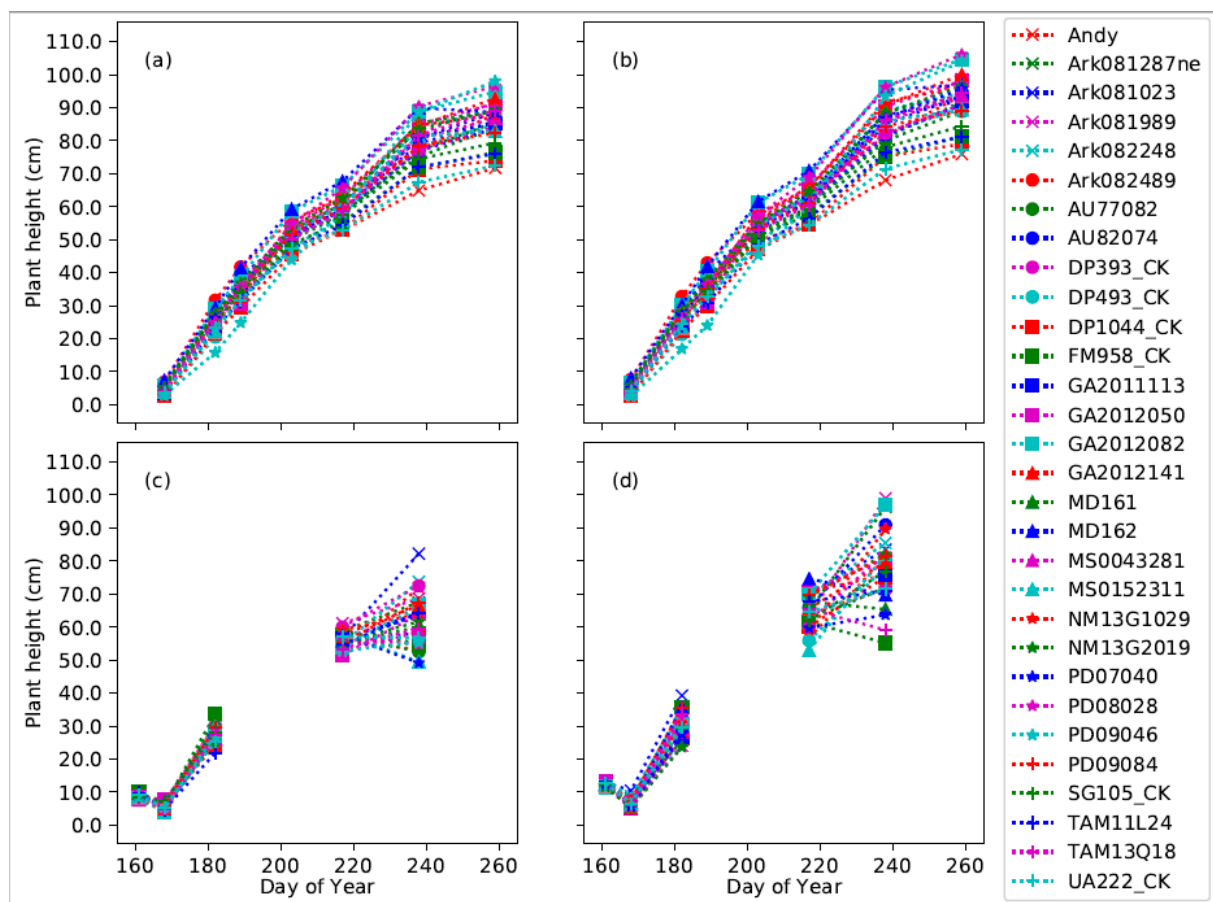


Figure S1: Growth curves 2016

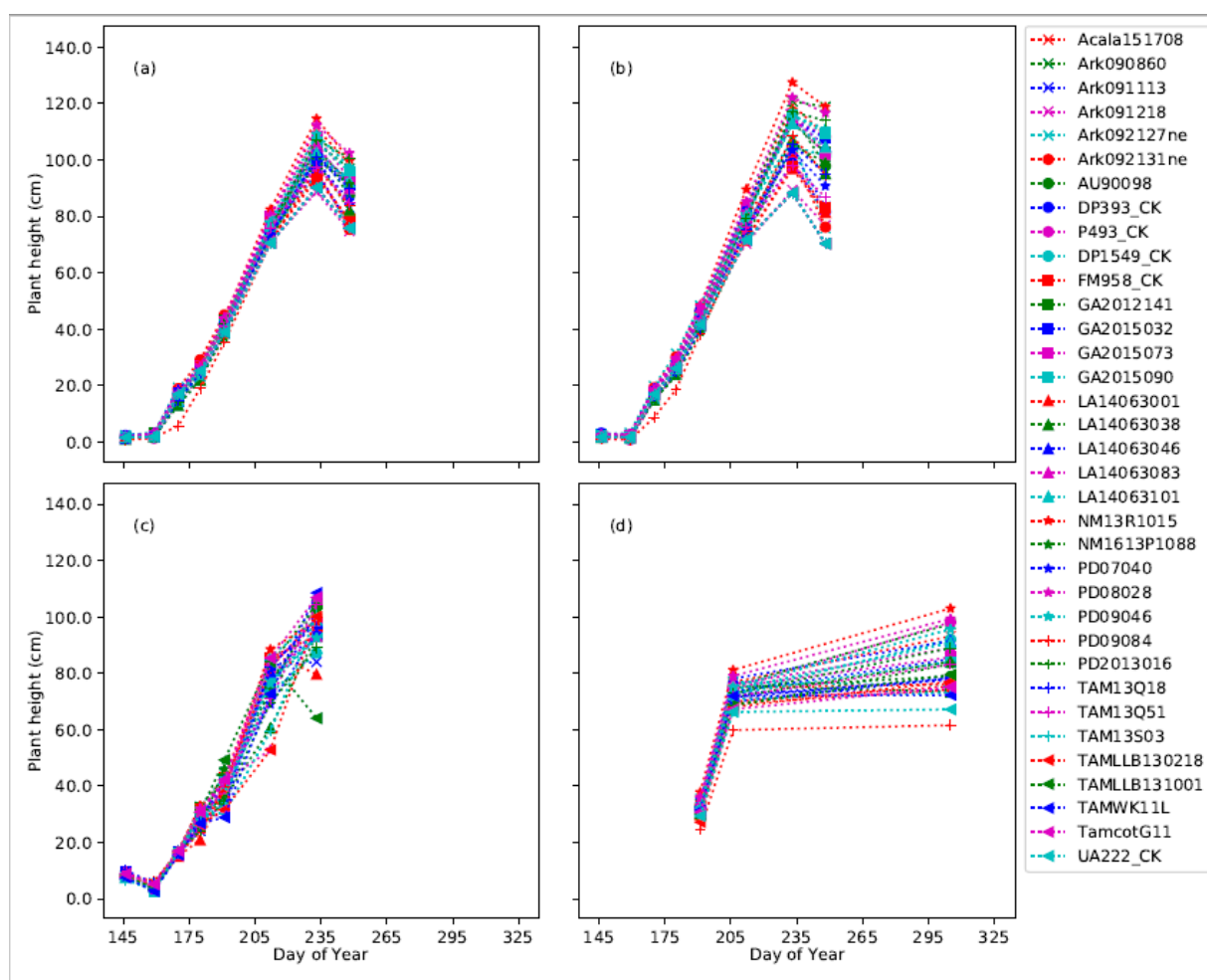


Figure S2: Growth curves 2017